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ESSAYS, MONOGRAPHS, AND CASES.

The Treatment of Paralysis of Motion. By CHARLES F. TAYLOR, A.M., M.D.

The prognosis in cases of paralysis of motion should always be guarded, and should be governed less by the degree of paralysis than by considerations of the character and seat of the lesion in the nervous system. Where there is actual organic lesion in any of the nerve centres, it is not probable that medical treatment can be of any avail, except, perhaps, to ameliorate some of the most annoying symptoms; but it is so difficult to distinguish in many cases, with certainty, between the organic and functional lesions, that nearly all cases should have the benefit of any doubt, and be subjected to the proper treatment for a sufficient length of time. Among those cases having the slightest chance of recovery, may be mentioned softening of the cord from excessive venery, syphilitic affections, and exostoses, and some cases arising from violent concussions. Still, even in these discouraging cases, treatment may be attempted, for even a very slight relief may be of great value to a person helpless from loss of voluntary motion; and a perceptible improvement is generally witnessed, if not an actual process of cure; the little possible motion is regained which may have been supposed through despondency to be entirely lost.

But that there are many cases of continued paralysis of motion that are merely functional, and not caused by organic lesion in any of the nerve centres, is fully attested by the results of applying a rational system of medical treatment, as well as from the results of *post-mortem* examinations. Restoration of impaired nerve function, as well as restoration of nerve tissue, takes place very slowly.

Even the slight pressure of the fingers on a nerve trunk, as of the ulna, where it passes over the internal condyle of the humerus, will so far paralyze the little and the ulnar side of the ring finger, that several minutes elapse before we get complete control of them.

Should this pressure be continued a certain length of time, the paralysis would doubtless be more or less complete, though the nerve tissue might remain perfectly intact. Now, there are various ways in which paralysis of motion may exist and be continued indefinitely without organic lesion in the nerve centres, except so far as imperfect nutrition always accompanies a loss of function. Any cause, local or general, capable of overwhelming the nerve centres may produce paralysis, and when once produced, though the cause be removed and no organic lesion remain, the paralysis may continue, because the function once lost is with difficulty re-established, owing to the low nutrition in the nerve centres while the cause existed, which, when the cause ceases, still renders volition impossible, and without which performance of function there can be no improved nutrition; for it is by the performance of function that the nutrition of every organ takes place. Then we often meet paralysis of a limb in children, which continues through life, though robust health may have followed the fever or other disease producing it. Many cases also recover, but not until the corresponding member on the other side has got the start of a year or two in growth. Also, cases of paralysis arising from Potts' disease of the spine frequently recover after anchylosis has taken place and the pressure from effusion removed, or the inflammation has subsided, &c.

But whatever may have been the cause of the paralysis, whether effusion into any portion of the cerebral mass, inflammation of the membranes of the chord or brain, the shock of violent disease or other cause, the first indication is, of course, to ascertain the cause and remove it.

Unfortunately, in most cases, even the proximate cause lies beyond our reach, except by indirect means. Where the access of the disease has been gradual, the treatment may cautiously commence; but in recent cases, especially if they are severe, much treatment of any kind is to be deprecated. The nervous system is already overwhelmed by the

force of some powerful shock, and till it has had ample time to recover, and has recovered so far as it is capable of reacting, any efforts to act on or through it will be in danger of doing harm instead of good.

The rule that surgeons apply to cases of severe injuries before performing an operation is equally applicable here. We must wait for reaction to take place. It may be several weeks or several months, according to the nature of the case and the recuperative powers of the system.

Whatever may be the utility of medication in some stages of this disease, I regard the exhibition of strychnia in the first stages of paralysis, goading up the nervous system, already completely exhausted, as being particularly harmful. It adds nothing to the capacity of the nervous system, while it still more completely overwhelms it. But every hygienic means should be brought to bear in the first stages of this disease. Special attention should be paid to the diet. Paralytics are very apt to live badly, taking altogether too much food to be properly disposed of in their confined condition; they often eat to surfeit, without being aware of it. There is also great deterioration in the quality of general nutrition, interstitial change taking place much more slowly, and much less perfectly—so much so, that the odor arising from the body and breath of paralytics is precisely like that of very old persons. Even the expression of countenance and intellectual manifestations have the same senile character. Oxygen is the great purifier, and the patient should be kept in the purest atmosphere, frequently changed, and allowed to come in contact with the skin to yield its tonic effect to that organ, in order to excite respiration; and tepid spongings of the body will be found useful for the same respiratory purposes, as well as for cleanliness. Of course, such special medical treatment as is indicated by the present condition of the case—as for instance, to cause absorption of an effusion or clot, to attend to the digestive and depurating functions, to support the strength, &c., by any means best calculated, in the physician's judgment, to accomplish these purposes—should be employed at this stage of the disease. In the absence of the pressure of muscular contraction, œdema of the extremities may be relieved by frequent kneading with the hands and pressure on the soft parts. But in cases accompanied by spasmodic action of the muscles from reflex influence, it is not common to find œdema. But, besides plenty of pure air, no more plain food than can be vigorously digested and properly assimilated, and whatever may be embraced in general hygiene, there is very little that can be done in recent cases without danger of injury, until the system begins to react from the shock. Even without

treatment, or in spite of treatment, many cases do react, and after a while entirely recover. But the great majority of cases convalesce to a certain degree, and there stop. It seems impossible, with the treatment usually adopted, to get them beyond a certain point. But suppose the system has had time to react after the inception of the disease, or suppose the progress is gradual, the patient becoming conscious of having less and less control over certain members, what are the indications of treatment? The principal indication evidently is to re-establish the connection between the muscles and the brain. This is to be done in the same manner that it is done in health, viz., *by the use of the muscles.* In health, every movement makes the next movement possible. In paralysis of motion, how shall the first movement be accomplished? After long inaction—first from disease, and subsequently from habit—how shall volition be communicated from the central to the peripheral brain? Let us follow nature.

The object is a definite movement; the means are muscular contractions; the cause is the will. We attempt to accomplish this, first, by a process of exclusion; that is, we exclude all other movements while attempting to perform the required one; and not only that, but the attempted movement must be accomplished in every case without a single failure.

Suppose a case of hemiplegia. The patient has no ability to raise the arm; and not only that, he has lost even the power to try. No person can attempt anything that he *knows* he shall be unable to perform. So that his volition, with reference to his paralyzed side, if not entirely gone, is reduced to its minimum quantity. A simple effort of the will, at the physician's request, does, in such circumstances, but very little good. An effort of the will, to be of any service, must be recognized in the peripheral as well as central brain. How can the peripheral brain be made to recognize volition, so as to impart its stimulus to the muscular fibres with which it is in contact? In the first place, the patient must be placed in such a position, that all voluntary muscular motions to keep himself in position will be avoided; he must be either lying or half lying, and in such a manner that, being supported in all directions and perfectly comfortable, he will employ no other muscles than those belonging to that portion of the paralyzed side which it is determined to act upon.

For instance, suppose we wish a flexion and extension at the elbow; having placed the patient in the position above described, we take the paralyzed arm in our hands, and, extending it horizontally, rest the arm firmly against our thigh, holding it firmly with one hand, while

with the other we grasp the forearm near the wrist. It will be remembered that the patient is in such a position that neither innervation nor arterial blood—both of which are necessary to muscular contraction—will be diverted to any other part by any other movements. This is very important to remember in the treatment of this disease; for, if at this stage of the treatment, other movements are going on at the same time, the volition will be diverted from the paralyzed muscle to those more easily affected and already occupied, thereby seriously interfering with the intended movement. Now tell the patient to bend the elbow very slowly and very gently, and not to exert all his power in the effort. We are supposing a case of complete loss of voluntary motion. It is well known that if a man in perfect health should exert all his available force in a single effort or succession of efforts, the consequence would be a diminution of power, and even a decrease in the size of the muscle, rather than an increase of them. The same rule will apply as much more forcibly to the paralytic as his fund of available force is less than in health. In commencing the treatment, the object is to direct volition to a particular group of muscles, and no where else at the same time, in order to obtain the maximum amount of muscular contraction with the minimum expenditure of force; but, as in health, where a succession of such efforts are to be made without fatigue, so here only such an intensity of volition is employed as can be repeated a certain number of times, with equal force, without exhaustion. In order to guard still further against the ill effects of too great effort, only three or four are made at one time, when the patient rests. Eight or ten different movements given at one sitting are enough for one day. By doing a little, we accomplish something; but by over-doing ever so slightly, we destroy all the benefit that preceded.

At the first moment that this effort is made by the patient, without waiting to allow him to see whether or not the forearm moves, the arm is to be carried in the required direction, as though the flexion had been done voluntarily. Thus we have an effort concentrated upon a particular part, and a movement following the effort, though as yet not as a consequence of it. But something certainly has been accomplished even in the muscular tissue. In the flexion of the limb there is the stretching of the extensor muscles and the mechanical contraction of the previously stretched flexor muscles, as in health; both affecting somewhat the capillary circulation, and making some impression upon the peripheral nerve loops, sending in turn at least a reflex influence toward the central brain, thus doubling the effect of the

movement. The effort, though gentle, should be concentrated, well-sustained and determined, in order to accomplish which, the will of the operator should always operate through the patient. It is not enough that the patient be told what he is to do, and then be left to do it as well as he can, for inability to do this is the essence of his disease—but in everything he does he must act only under a command. A kind, but determined command is followed by an increased desire, which is the most favorable condition for an effectual volition, because a volition thus begun commences at its maximum power, and continues full and well-directed to the end. Although the operator himself actually makes the movement which is perceptible to the eye, namely, the flexion of the forearm in the case supposed, it is more to secure the *morale* of the patient—for he sees it move while he is trying to move it; he cannot tell how much of the movement belonged to himself, but feels and hopes that he helped some; and as his effort was slight, perhaps he could do more. Yet in all hopeful cases there probably is a certain amount of contraction resulting from every effort, but, being insufficient to make the sensible motion, it ordinarily goes for nothing. This usually unseen and unknown penetration of the will into the tissues, toward which it has been sent, and the hope of being able to increase it, constitute our basis of expectation.

Suppose a force of two pounds of muscular contraction to be capable of raising the arm; if we began with a force of only one ounce, it might be increased to thirty-one ounces, and still the arm remain unraised; but the most hopeful change has been going on in the nerve and muscular tissues, while yet there is no palpable result. If we have formed the habit of obedience in a few muscular fibres, this habit and the increased nutrition resulting from this functional act may in time extend to others till the normal condition is fully restored. We may avail ourselves of still another means of assisting volition to accomplish its purposes. I allude to the dual arrangement of the organs and the tendency to symmetrical development. Now, if the patient be made to bend both the sound and the paralyzed limb at the same time and in the same manner, taking care that the will be equally intent upon both movements, it will increase the tendency to contraction in the palsied muscles to follow the effort. But such movements should be used only a part of the time. I have mentioned that innervation and muscular contraction take place under the influence of arterial blood. The will exerts a powerful influence upon the circulation, increasing it in the parts towards which it is directed. This is another reason for the gentle and continued effort, thus allowing time for the circulating fluids

to arrange themselves under this stimulus. But mechanical means may sensibly aid in effecting this result. During the cessation of voluntary motion, the circulation in the capillaries becomes enfeebled, and increased exosmosis of the fluids takes place through the distended walls of the vessels; the stagnant blood becomes more venous than arterial, and is infrequently purified by being brought into contact with the oxygen of respiration, owing in a great measure to an absence of the mechanical pressure to which the contents of the capillaries and other fluids are subjected during health by the contraction of the muscles containing them. This mechanical aid may be partially supplied from without, by means of pressure of the hand and kneading of the muscles with the hand and fingers. The retarded circulation that may thus be accelerated in passing to the heart and lungs, would be laden with impurities to be eliminated at the proper emunctories. To carry out our attempt to imitate nature, and follow her method of substituting a physiological for a pathological condition, we endeavor to induce an arterial condition of the capillaries by stretching the palsied muscles, or kneading them while in an extended position. Reflex action is to be avoided, because contractions produced in this manner, being entirely abnormal, seriously interfere in establishing the control of the will, which is the object aimed at; but direct action may be stimulated in some cases by gentle pressures along a nerve trunk, or on a plexus of nerves; slight percussion along the spine and over the sacrum, &c.; but these stimuli should never be used where there is reason to suspect organic lesion of the medulla spinalis. It is a remarkable fact that though organic disease of the cord is a hopeless disease, yet, being characterized by frequent spasms of the muscles, it is not attended by that wasting away of the muscular tissue that usually follows paralysis unaccompanied by such reflex contractions, though the latter justifies a much more favorable prognosis. Muscular contraction, though abnormally produced, favors the circulation and nutrition in this tissue, though the exigencies of the case prevent the penetration of the will beyond the seat of the lesion. But spasms of the muscles accompanying resolving or functional disease of the nervous system, do not seriously interfere with the treatment or the progress of the case. The foregoing remarks are applicable to complete paralysis of motion. But in those more favorable cases of partial paralysis, where the will has regained, or has never been deprived of a portion of its control of the muscles, the principles of treatment indicated in complete palsy are equally applicable, with the addition of another method of still more perfectly concentrating the will upon the designated muscles. As the first

method may be called the process of exclusion—that is, excluding the system from participating in any other movements—so this may be called the process of concentration, or concentrating all other muscular efforts of the whole body upon the designated member which shall be cumulative in the palsied muscles. There being still some power in these muscles, such movements, besides those previously explained, may be given as require contractions in other muscles besides the affected ones; but how feeble soever the contraction of the affected muscles, the contraction of the other muscles, be they ever so remote, should always be *less* than in the affected ones, and should be such as are necessary to complete the contemplated movement. For instance, in hanging by the hands it will be seen that, from the necessities of the case, all muscular efforts in all parts of the body are rendered necessary from the position, and that the force of contraction gradually increases from below upwards, and is the most intense in the hands and arms. And as the volition and contraction converge towards the upper extremities, so do the innervation and circulation flow in the same direction. This is what I call a *cumulative* movement. But the same care should be taken to avoid fatigue as in the first case, and all through the treatment this idea of calling out only so much force as can be easily and pleasantly borne, and the depression of which effort can be quickly rallied from, and that leaves no exhaustion behind, should be kept in view.

In paralysis of motion the principles just laid down should govern the construction of every prescription of movements. But there are other indications that may be responded to by the use of movements. Those cases of paralysis that arise from congestion of the dura mater, or any abnormal nutrition of the membranous envelops of the cord, will have this morbid nutrition diminished by inducing a higher nutrition in the contiguous muscles of the back. This may be accomplished by various flexions of the back in different planes, such as will bring the dorsal muscles into action; at the same time the movement acts directly on the cord itself through the ligamentum dentata, thus supplying a healthy mechanical stimulus to the cord. But we should not make any of the above mentioned movements till we are sure of a good circulation in the extremities. Indeed a peripheric circulation once thoroughly established, central congestions will be proportionally lessened. This may be attained principally by movements on the unaffected portions of the body, such as will promote an arterial circulation in the extremities.

Some of the most annoying symptoms in cases of palsy are con-

nected with the bowels and urinary bladder. Paraplegia is almost always connected with constipation of the bowels and incontinence of urine. The constipation is often so severe as to require large doses of the most powerful cathartics to effect an evacuation of the bowels, which being repeated every few days seriously interfere with the patient's chances of recovery. The constant liability in some cases to, and the annoyance and inconvenience of, involuntary urination is a great source of depression and discouragement to the patient. The treatment for these cases is so simple that many might refuse to employ it, but the efficacy of which is fully confirmed by experience.

In constipation depending on paralysis of the nerves controlling the motions of the lower bowels, and the sphincter ani, the treatment must be adapted to this indication. We must act through the capillary circulation and innervation of these parts. This may be done by acting by mechanical means from without inwards. Let the patient be laid on his back, his arms stretched up over his head and held by an assistant; then, with both hands laid flat on the abdomen, make a rapid shaking or vibration of the abdomen and its contents. This may be followed by kneading with the fingers along the course of the ascending, transverse and descending colon, pressing deep down into the tissues. If spasm of these muscles should follow the vibration, then the arms need not be raised over the head, or the knees can be raised and held by an assistant, or the shoulders can be elevated, the object of which will be to relax the muscles of the abdomen; but the treatment in that case will not be so efficacious as if applied over the extended muscles. Also in the same position the legs may be raised by the patient himself, bringing the abdominal muscles into action. For paralysis of the bladder and sphincter ani, the thighs are held flexed upon the trunk, and a vibration is made with a blunt stick upon the perineum. Gentle percussion across the hips from one trocanter to the other, and slight pressures along the sciatic nerve, where it issues from the pelvis, will stimulate the nerves given off to the lower bowels.

This simple local treatment, with the general tonicity induced by the general treatment, has been sufficient hitherto in my practice to overcome the worst cases of paralytic constipation and incontinence of urine. Where there is troublesome spasmodic action of the muscles, this is best overcome by very slow bendings of the joints, while the patient remains perfectly passive. The spasm which the muscles at first take on, upon being put to the alternate stretch and relaxation, will gradually subside as the nerves become accustomed to those impressions so nearly resembling normal contraction. Where there is spas-

modic action of the muscles following an effort, the volition being divided, as it were, and scattering to different muscular groups in remote parts, great pains must be taken to concentrate the will upon the designated member. Indeed in many of these cases nothing but the greatest tact, patience and perseverance can effect a cure.

Of course, a treatment like that which I have just endeavored to describe, acting entirely through the general and local nutrition, through functional manifestation, implies a certain amount of time and considerable patience; yet, considering the nature of the disease, the progress in some cases is remarkably rapid.

Dr. Batchelder, in his excellent report of cases of paralysis treated by him with *exercise* in the New York Hospital, mentions the difficulty he found in inspiring these sufferers with sufficient ambition, and that they were generally satisfied with a slight improvement, and refused or neglected to make further effort. Now, I never have encountered any such difficulty, but rather the contrary. Making due allowance for the difference in the character of my patients from those to be found in hospitals, yet I think it was mainly owing to the exhaustion following the kind of exercises that his facilities allowed him to contrive for them, though he seemed sensible of the injurious effects of over-doing. Greater precision and less effort have an encouraging effect upon the patient's mind, especially when he sees day by day that he can do many little things that before he supposed to be impossible.

Electricity has been a good deal used in the treatment of paralysis, and even now almost all physicians resort to it when other remedies fail, as though the last hope lay in its employment; but it seems to me without sufficient reason either in experience or philosophy. I know it has been held by respectable members of the profession, and is now largely entertained by certain among lay people, that the nervous system is a sort of galvanic battery; that the nerves are electric conductors, and that innervation is the conduction of electricity. And where these views are not entertained, there seems to be a sort of tacit acknowledgment that electricity somehow ought to be good for paralysis, if we only knew how to administer it. Let us look for a few moments at the scientific bearing of the electrical treatment, for it is one of those means that charlatans seize upon to prey upon the credulity of the public, to the detriment of legitimate medicine.

Innervation is an organic functional act, subject to the same organic laws of waste and repair of the tissue performing it as all other manifestation of function. This we know by the large amount of

phosphates and other constituents of nerve substance to be found in the urine after excessive mental exertion, fright, hysteria, &c., the same as urea is thus found after great muscular effort. A little reflection will discover that there is much less analogy between the nerve force and electricity than is commonly supposed. The idea of *supplying* it to the system is even more absurd than the supposition that, because India rubber and muscular tissue are both elastic under certain circumstances, the former can be substituted for the latter!

Besides, this idea of *introducing* electricity ignores the manifest qualities of this imponderable agent itself. Electricity is not an entity—a substance that can be poured into or through anything, like a fluid, but it is a *condition*. Polarization in solid conductors and electrolysis and decomposition in fluid conductors is all there is of what is called the passage of electricity, and there is no more scientific reason for supposing it would be remedial in any manner whatever than any other chemical agent. And as organization in the nerve substance is necessary to its restoration, and as the conduction of electricity is chemical change or disorganization, (electrolysis,) diseases of the nervous system would seem to be ill adapted to the employment of this remedy. And such I believe to be the case. This is not to say that electricity may not be a valuable remedial agent, but the genius has yet to arise that shall place its employment upon a scientific basis. When the cause of the paralysis is unmistakably muscular, as where there is retraction or relaxation of the elastic and muscular tissues; or when there is any reason for wishing to modify the quality of the fluids and the organic processes in the cell formations in the mass of the tissues, then electricity may be employed, within certain limits, to advantage. The chemical change occurring with the passage of electrical currents affords a certain amount of stimulus that may be salutary while not extending to lesions in the nervous system, where we cannot afford to make cause for repair beyond that occurring as a part of its own functional manifestation.

Case I. John Erskine, a lad fourteen years old, was brought to us on the 27th day of April last. Six months before, he met with an accident, causing a backwards dislocation at the right elbow joint. It appeared to have been properly reset, and though there had been adhesions, they had been broken down, and at that time there was perfect motion of the forearm, both of flexion and rotation. But from the first there had been nearly complete paralysis of the whole arm, but much more complete below the elbow. This state continued with scarcely any improvement up to the time I saw him, six months after

the accident. At that time there was great emaciation of the whole arm, but especially of the hand. Indeed the muscles of the hand seemed to have disappeared, and the skin of the palmar and dorsal surfaces could be brought in apparent contact between the metatarsal bones without difficulty. Extension of the fingers was impossible, but he could contract them slightly; they remained in a drawn up and crooked position. The hand dropped and remained in the position where its specific gravity brought it while wearing his arm in a sling. There was impaired sensation, and the hand felt cold to the touch. This case, though sufficiently severe, yet arising from a local cause, showed a most remarkable recuperative power. He was treated nearly every day for about five weeks, when he was dismissed, *cured*. He had perfect motion even in those muscles—as the adducters of the thumb—that seemed at first to be completely palsied, and the increase of muscular tissue was remarkably rapid; sensation and warmth returned, and when he left there was only a slight difference in the size and power of the muscles of the two hands. About a month later, I heard by a fellow patient who saw him, that the muscles of that hand had attained their full size and vigor.

This case is a very simple one, and is principally important as clearly illustrating the view of the pathology of curable cases of paralysis of motion, as set forth in the first part of this paper.

Case II. A gentleman from Connecticut, thirty six years old, a large, fine-looking, well-formed man, but not plethoric; married; of very temperate habits; an artist by profession; felt numbness in the lower extremities on the fifteenth of March, 1856. He failed rapidly till the middle of April, by which time there was complete paraplegia—there being neither voluntary motion nor sensation below the diaphragm. After the first few months he rallied somewhat, and became able to sit up a little, and could move the left leg with tolerable facility, but the right leg remained nearly useless; there was slight power in the extensor muscles, but none whatever in the flexors. Sensation very imperfect, and he had remained without sensible improvement for about one year. Commenced treatment on the 4th of May, 1858. At that time he had not had a single voluntary evacuation of the bowels since his first attack, more than twenty-six months before, and the amount of medicine taken and the number of injections used to effect a passage were enormous. There seemed to be complete paralysis of the sphincter ani, and the evacuations were of a flattened shape, like a knife. The urinary bladder was also equally affected, the urine passing involuntarily at all times, rendering the wearing of

a urinal constantly necessary. He complained of a sense of tightness, as of a band drawn around the waist; there was also frequent spasms of the muscles of the legs—especially of the right leg—often causing the limb to take on a jerking vibratory motion, which was excited and aggravated by attempting to move, as of turning in bed. These spasms often lasted six or eight hours without cessation. He could not stand alone for a moment. He was under my personal care and treatment about two weeks, when his father, being a physician, took him home and continued the same treatment at his own house. When he left he could stand alone, and take several steps with assistance; had a perceptable increase of power and motion in both legs, especially in the right, the flexors of the knee having been brought under control; could do his part in all the duplicated movements required of him, and, for several days before leaving, had had free spontaneous evacuations of the bowels of the natural cylindrical shape. Two months subsequently, namely, about the middle of July, I saw him at his father's in Connecticut, where the treatment had been continued as well as their facilities afforded, up to that time. At that time, he mentioned that he had had no incontinence of urine since the day he left New York; bowels were regular, and the sphincter ani continued to perform its functions; he could get up and down with perfect ease, and could walk about the room, and even out to the neighbors, with a little assistance. In fact, all the symptoms of paralysis were gradually subsiding, and sensation and motion were gradually returning. I have just got a letter from him, (September 17th,) saying that he is rapidly improving, and can walk quite well, without any other assistance than canes. Continues treatment.

Case III. This is a little girl, eleven years old. About six years ago she had an attack of brain fever, which caused paralysis of the left side. She gradually recovered, however, except the left upper extremity continued palsied. The whole arm and shoulder were very much atrophied, and the arm hung useless and motionless by her side, and, as is usual in these cases, the forearm was so far pronated that the dorsal surface of the hand remained in contact with the thigh.

There was considerable use of the fingers, and she could cling to anything the hand was placed on, though the fingers were considerably deformed through relaxation of ligaments at the articulations. The deltoid and biceps flexor muscles seemed to be entirely wasted away, and for a long time there could not be perceived the slightest tremor of muscular contraction in these muscles, but voluntary extension of the forearm was possible. The humerus was emaciated and curved, and

the olecrinon process was shortened, so that in extension of the forearm it would be partly flexed backwards upon the dorsum of the humerus. Commenced treatment February 5th, 1858, and has continued daily, with about six weeks' vacation in July and August, ever since. Improvement has been constant and satisfactory. She now has the use of every muscle in that arm, including the deltoid and biceps flexor, and there has been a large increase of muscular tissue, which is to be seen and felt. She can now flex the forearm, and with a slight assistance can stretch the arm over her head. The shape of the hand is perfect; she carries the palmar surface of the hand properly inwards, and is using that hand and arm more and more about her plays, though, having been useless for so long a time, there was some difficulty at first in getting her to commence to use it, but now she is quite handy with it. Continues treatment.

CASE IV. M. E. B., a little girl from Rhode Island, seven years old, came under my care the third day of March last. When one year and a half old she met with a fall which brought on a gradually developed paralysis of the right side. Of this, however, she recovered so far as to get nearly perfect use of the right hand, though it is somewhat the smaller of the two; but the right leg, after the first efforts towards recovery, seemed to get no better, but rather grew worse. It was one inch shorter than the left, and very small and feeble. She often fell down in walking, and could not sustain the weight of the whole body on it for a single moment; whenever she attempted to do so, it would immediately give way, and precipitate her to the floor; there was great relaxation of the ligaments of the foot and ankle, the toes were drawn down towards the heel, particularly when she was excited; indeed, the bones of the foot were so loosely held together, that they could be easily moved upon one another with the fingers; and there was general indication of relaxation in that leg. She was under treatment about two months and a half, and can now use that leg with very great facility and strength. It has grown larger and stronger, being now able to sustain the whole body with ease, even while courtseying upon it, till the leg is at right angles with the thigh, and then raise into the upright position again; the foot is natural shaped, and the former relaxation about the ankle and foot is nearly gone. This case had also a lateral curvature of the spine to the right, caused by the short leg and weakness of that side; but it was entirely removed by the treatment, and a recurrence prevented, by causing her to wear a cork sole on the right foot, so thick that the right hip is of the same height as the left. She left treatment and returned home

nine months ago. I have just heard that she has continued to improve, till now the previously deformed foot is sometimes mistaken for the other, its size and shape are so nearly perfect.

Many more cases might be cited, but enough have already been given to attest the efficacy of the movement cure in the treatment of paralysis of motion. I have not attempted, in this paper, to give the complete pathology of all cases of paralysis of motion—which is supposed to be understood by every physician—but only so much as would illustrate the treatment herein advocated. Without pretending that it is always applicable, but believing that it answers many indications not otherwise reached, and that in many cases much suffering may be relieved, and many subjects may be raised from helplessness to usefulness, I commend this subject to the attention of the profession.

Letters on Italy.—No. 3.

HALLE ON THE SAALE, *September 8th*, 1858.

MESSRS. EDITORS—The constant occupation which the advantages offered to the student by the Hospital of Vienna necessitate, prevented my continuing while in that city my cursory observations on matters which I found of interest in a professional way in the land of music and poetry. I concluded my last letter with Naples. The road leading from this city to Rome passes through the ill-famed Pontine marshes, which, from the baleful reputation that has so long clung to them, deserve a passing notice. They are entered on the post road which follows generally the Appian Way, (the latter being in one or two places distinguishable from its immense polygonal slabs, worn by the wheels of ages,) at a point about half way distant from Naples, and just opposite to the remarkable mass of rock known to the ancients as the charmed *Circe*, which rises like a colossal monument out of the broad waste, and separates it from the still broader waste of the Mediterranean. This road passes through them for a distance of 35 to 40 miles, which is nearly their extreme length, while they cover a plain between the mountains and the shores of the sea, of a mean breadth of nine miles. The appearance of the entire tract is desolate in the extreme. But it is by no means all of it under water, or even so wet as to be boggy. On the contrary, large portions of it have been reclaimed by a system of drainage, introduced by Boniface VIII, and carried on with more or less energy until the time of Pius VI, under

whom it was completed. These works are still maintained by Government, at an annual outlay of about 4000 scudi.* Their best efforts, however, have only succeeded in making it available for grazing purposes—but a very small portion being subjected to cultivation. Large tracts of it are almost unapproachable by man, and here buffalo, deer, and wild boars enjoy undisputed possession. These buffaloes, large herds of which we frequently saw close to the road, are by no means the noble bison of our prairies, but a heavy, ill-shaped, cumbersome beast, susceptible of domestication, and often trained to the yoke.

It is probable, from the accounts given by the Latin authors of that date, that either the drainage was more thorough under the energetic rule of Augustus, than in later days under the Pontiffs, or that causes are now at work which render the accomplishment of this end more difficult than it then was. This latter ground is certainly tenable, for there is little doubt, from records, both written and traditionary, of the times previous to the Roman domination, that this now pestilential marsh was once the site of flourishing cities, and the granary of that entire region.

The dangerous character of the malaria here has undoubtedly been overrated. Like that found in similar districts in our own country, it is seriously to be feared only in the autumn, and then chiefly at night. Its great fatality, which cannot be gainsaid, is probably to be attributed to the thriftless and improvident character of the class of people who are exposed to it, and their inability to provide themselves with proper means of protection against its influence. At certain seasons numbers of the peasantry spend entire nights, not only under the open sky, but without even the safeguard of a fire, and the climate must be a very salubrious one which will stand such a test.

There can be little doubt that in a well-built house, and with proper precautions, such as avoidance of exposure, and careful ventilation by means of fire, an entire season might be passed in many parts at least of these dreaded marshes, with a good degree of impunity.

The pallid, sallow faces and listless movements of the few wretched inhabitants whom we met, however, sufficiently prove that they do not, as indeed they cannot, employ these very necessary precautions.

The climate of the City of Rome itself is, in the main, salubrious—being temperate, not subject to sudden changes, and tolerably dry. The mean extremes of its temperature are from 44° 5′ of Fahrenheit, to 75°. And it is a rare thing to have the thermometer reach 90°.

* The value of a Scudo is very nearly that of our dollar.

It will thus be seen that its dreaded heats do not compare with those of our own cities. The inhabitants observe the precaution of never walking in the sun during the warmer months, partly from the known deleterious effects of a hot sun in malarious climates, and partly from a dread of the extreme contrasts of temperature in passing from the immediate influence of the sun's rays into one of their damp, chilly, sunless, narrow streets. Indeed, it has passed into a proverb among them, that "none but *Englishmen and dogs* walk in the sun."

They are also peculiarly careful to avoid exposure to the air during the hour immediately following sunset, that being deemed the most dangerous period of the day; so that just at that time the streets of the Imperial city are almost deserted. The malaria is considered dangerous from July until October. The miasms appear to be dense and heavy, rising only five or six feet above the surface, as is attested by the fact that they do not overleap the convent walls, the nuns being able to promenade in their gardens with impunity when the rest of Rome must house itself. The influence which an increase of population has in combatting the poisonous influences of a malaria, probably in a great measure from the increased number of fires which it renders necessary, is clearly thrown in the comparative immunity enjoyed by the Ghetto or Jews quarter, which, notwithstanding that it is as filthy and disgustingly dirty, and as closely crowded as the quarters occupied by our Israelitish brethren in European cities generally are, yet sends much less than its quota of those suffering with malarious diseases to the hospitals.

A residence in Rome has been found serviceable in the earlier stages of phthisis, but not in the more advanced. Is this not to be attributed to the antagonism between the two affections, or rather the influence of a malarious atmosphere in checking the development of tubercles, pointed out by Dr. Green? Sir James Clark has found it beneficial in bronchial affections and chronic rheumatism; but it is to be observed that invalids visiting Rome for their health, should observe a course of conduct which is next to impossible in the midst of so many attractions—namely, carefully to avoid all sight-seeing. For the churches, museums, and palaces which one visits for the purpose of seeing the collections of art, are miserably cold and damp, and most admirably contrived as propagators or even originators of disease.

The practice of medicine in the City of Rome has been very much embarrassed; as what useful art or science has not, by the interference

of priesthood? A moment's reflection on the atrocious doctrine of infantile damnation, and the consequently superior value of the life of the child over that of the mother, will at once show the immense number of maternal lives that must have been sacrificed in a city where a bigoted priesthood holds unlimited sway, and how almost impossible it must have been for an intelligent and honest man to have practiced that branch of our art.

A better proof of the blighting effect of this interference is scarcely required, than the fact that in this city of nearly 200,000 inhabitants, which boasts itself the centre of the fine arts, not a single medical periodical is published.

During the French occupation, the hospitals of the city were all united under one general administration, on the plan of the hospital system of Paris. They have, however, since been separated, and are now each of them a distinct institution. Their annual endowments, taken together, amount to about 259,000 scudi, and the number of patients to 4,000—between $\frac{1}{40}$ and $\frac{1}{50}$ of the entire population. The finest of them will serve as a type for them all. This institution is called the San Spirito, (the Holy Ghost;) is of great antiquity, having been founded at the end of the twelfth century. Notwithstanding its immense resources, derived from bequests, following year after year, and century after century, being under ecclesiastical administration, it is heavily encumbered. The fact that its administrators are popularly known, from the splendor and extravagance of their style of living, as "*Il piu gran signore di Roma*," (the greatest lords of Rome,) may perhaps afford a clue to the state of its finances. Its wards are large, unusually well ventilated for those of a European hospital, and unusually clean for those of an Italian. This latter fact is attributable to the judicious management of the Sisters of Charity, under whose immediate care the institution is placed. I was surprised to find that they were not of Roman origin, but introduced here from Paris, by the Princess Doria, after severe opposition by the Pope and higher clergy, on the ground that it would be prejudicial to the *morals* of the *clergy*.

The hospital is divided into three departments—the General Hospital, the Foundling Hospital, and the Lunatic Asylum. The number of beds in the general hospital is 1620. The mean number of patients annually 15,000. The number of deaths $8\frac{1}{3}$ per cent. This small per centage is owing to the fact that an immense number of the cases treated there are intermittent fever and the allied diseases, which may often present themselves several time in the same year, and go out relieved after a short course of quinine.

There is one ward in the institution devoted to clinical lectures, and there is also a small pathological museum connected with it, containing some careful and interesting preparations of the vascular systems, by the great anatomist, Lancisi. The foundling hospital has accommodations for 800. The number of foundlings annually relieved in the city, of whom the greater part come to this institution, is upwards of 3000—a strange comment on the workings of celibacy; and of this number the fearful mortality of 57 per cent. is recorded. The lunatic department numbers 450 inmates, and shows the rather large average, for such an institution, of 11 per cent. of deaths. Cures are comparatively rare. The old system of close restraint and lack of objects to interest and amuse is still pursued, and with its usual bad results.

A glance, however cursory, at the medicine of Rome would not be complete without a passing notice of "Il santissimo Bambino." This is the name given to a miraculous doll, which is preserved with great care and veneration in one of the churches, and of which the following is briefly the history:

A Franciscan monk, returning from a pilgrimage to Jerusalem, amused himself by the way in carving out an image of the Virgin, from a piece of olive wood, which he had obtained on the sacred mount. Now, although he did not know it, Luke, the beloved physician, had had his eye on him ever since he began this pious work; and when the monk, wearied with his journey, one day fell asleep as he sat over his work by the way-side, in the noon-tide heat, the saint popped down from his mansion in the skies, with a paint pot in one hand and a brush in the other, and daubed the little object from heat to foot. On awaking, the monk became conscious of what had transpired, and hurried on to Rome with his precious charge.

It was blessed by the Pope, covered with rich clothes, loaded down with jewelry, and it was soon discovered that a portion of the medical talent of its saintly painter had fallen upon it, and that a man "in articulo mortis" had but to look upon it to be cured. It very soon became famous, and the list of its cures, perfectly well authenticated by *clerical gentlemen*, soon became infinitely more astonishing than anything that even Jayne's Family Almanac, or Old Dr. Jacob Townsend's Sarsaparilla Manual, have startled the world and duped fools with.

It was discovered, too, to possess peculiar efficacy in lying-in cases; and hence, whenever a case of difficult labor presented itself, and the unfortunate woman could afford to pay for the luxury, the most holy doll was called to her bedside, with its train of mumbling priests

And it is a fact which will scarcely be credited, that in this nineteenth century, in the City of Rome, the fees received by this daubed doll are annually greater than those received by the most intelligent and skillful physician. Cases are not wanting where it has been introduced contrary to the express commands of the medical adviser, and death has been the immediate result of so untoward an excitement.

In 1849 it was presented by the Revolutionists with the Pope's state coach, in which it used to pay its professional visits with great pomp. Upon the return of the Pontiff, however, it was of course deprived of this luxurious means of locomotion.

Just outside the city walls, and almost under the shadow of the towering pyramid of Sestus, is the quiet little enclosure where Protestants are accorded the privilege of burying their dead. And here a plain slab of gray stone marks the last resting place of John Bell. During the later years of his life, the great anatomist passed much time in the Italian cities, being devotedly fond of the study of art. His criticisms on works of art, and especially on sculpture, are some of the most learned, sound, and just that have ever been written, and are assigned a very high place in the library of English sculptors.

I know not how more appropriately to close this letter than by transcribing the following from his pen, on that master-piece of art, the "Dying Gladiator." It indicates the scope of his masterly mind, and shows how, not content with being perfectly acquainted with the origin and insertion of muscles, he traced their minutest action, even down to their expression of the emotions of the soul. It is as follows:

"Although not colossal, the proportions are beyond life, perhaps seven feet; and yet, from its symmetry, it does not appear larger than life. The forms are full, round and manly, the visage mournful, the lip yielding to the effect of pain, the eye deepened by despair, the skin of the forehead a little wrinkled, the hair clotted in thick sharp-pointed locks, as if from the sweat of fight and exhausted strength, the body large, the shoulders square, the balance well preserved by the hand on which he rests, the limbs finely rounded, the joints alone are slender and fine—no affectation of anatomy here, not a muscle to be distinguished, yet the general forms perfect as if they were expressed. The only anatomical feature discernible is that of full and turgid veins, yet not ostentatiously obtruded, but seen slightly along the front of the arms and ankles, giving, like the clotted hair, proof of violent exertion.

The singular art of the sculptor is particularly to be discerned in the extended leg; by a less skillful hand the posture might have appeared constrained; but here, true to nature, the limbs are seen gently

yielding, bending from languor, the knee sinking from weakness, and the thigh and ankle-joint pushed out to support it. The forms of the Dying Gladiator are not ideal or exquisite, like the Apollo; it is all nature, all feeling." BENJAMIN LEE, M. D.

Rupture of an Umbilical Hernia, and escape of a large mass of Intestines—Peritonitis—Opium—Recovery. By REED B. BONTECOU, M.D. Troy, N. Y.

August 9th, 1857—I was called to see Mrs. W. at 10 P.M. Found the patient (a stout, healthy looking woman) lying in bed with her clothes on, her countenance indicating terrible anxiety and suffering. She implored me to do something for her, saying that she had burst; that she was six months pregnant, and that a physician who came to see her about five o'clock, soon after the accident, had pronounced her case as hopeless. I laid bare the abdomen, and found a large mass of intestines and omentum, much swollen and very red, lying by her side on a coarse flannel skirt. They had escaped from the vicinity of the umbilicus, and made a tumor large enough to fill a peck measure. It consisted of nearly all the smaller intestines, with omentum; was covered with gravel adhering to the surface, and felt cold. I administered a grain of morphine immediately, and cleaned the protruding mass as well as the conveniences at hand would allow. On making an attempt to reduce it, I found it so swollen and œdematous as to preclude the possibility of doing so without enlarging the aperture, which I did at once with a probe-pointed bistoury, cutting freely upwards in the mesian line, and returned the whole without further difficulty.

Constant efforts at vomiting made it difficult to retain the parts until sutures were introduced. I pinched firmly together at its base a sac the size of an ordinary orange, including the umbilicus and a rent through which the parts had escaped, and placed four interrupted sutures through it. The flabby sac I then rolled up on itself and made answer the purpose of a compress, keeping it in its place by another compress, a girdle of adhesive plaster, and a bandage of cloth. The uterine tumor was of course apparent, and motion of the fœtus was felt. She had been laboring under an umbilical hernia since the birth of her youngest child two years previous, and during the present pregnancy it had increased in size, at times as large as the fist, and the skin covering the sac had for some time previous been tender, as if an abscess was forming in it. The accident occurred to her while

stooping to feed her chickens, at about 5 P.M.; the parts had therefore been protruded five hours when I first saw her.

The pulse was small and frequent, and she was still suffering from the shock of the accident. I gave her ten grains of opium in powder, and left others with directions to give one every two hours till she slept. The frequent large doses were given in anticipation of peritonitis, which I thought inevitable.

August 10th, 8½ *A.M.*—The patient had not slept, and the powders had been given according to directions, making in all 50 grs. besides the morphine. She was lying on her back, the limbs flexed, breathing easily, and quite free from pain. The vomiting had ceased soon after I left on the previous evening. The pupils were contracted, eyes bright, no drowsiness, tongue moist, was rational, and much terrified with the apprehension of death; had not passed urine, but made no complaint of distress on that account; could not detect any distension of the bladder. I left a number of ten gr. powders of opium; ordered them continued every two hours as before; prohibited much nourishment or drink.

3 *P. M.*—Is much the same as in the morning; complained of some pain in the lower part of abdomen, and had felt unusual motion of the child; had had no sleep, but attributed her wakefulness to the excitement of many persons running in to see her. She appeared rational, pupil contracted, eyes bright, tongue moist, no vomiting, no great thirst, and no desire for nourishment; pulse 90 and rather small; ordered the ten gr. opium powders continued every two hours as before.

9 *P.M.*—Patient still wakeful and complaining of pain all over the lower part of the abdomen. She had not passed urine since the accident, and I evacuated it with the catheter. Pulse 100, pupils contracted, eye bright, tongue moist, with thin pale fur, skin moist. Prescribed beef tea as nourishment, and 15 grs. pulv. opium every two hours till pain was subdued and sleep obtained. She was rational and composed.

11*th*, 9 *A. M.*—Patient still wakeful, quite easy, rational, and inclined to be cheerful. Since 5 A.M. had been vomiting a clear watery fluid without nausea. The powders had been given as prescribed, and had not been rejected. She was somewhat annoyed with motion of the fœtus. Had her clothes changed for the first time since the accident; pulse about 90; in other respects in much the same condition as on the evening previous. Prescribed ½ minim of creasote in bread-crumb pill for the vomiting, and to continue the 15 gr. powder of opium every two hours.

8 *P.M.*—Patient had not yet slept, though the house had been kept quiet; was quite comfortable, having suffered little pain except in the wound; was unable to extend the limbs; the lower part of the abdomen distended and tympanitic; had passed urine, ordered hot fomentations sprinkled with spts. turpentine, to lower part of the bowels, and a dose of oil and turpentine internally as a laxative. Prescribed ten grs. opium every three hours till sleep was obtained, and oftener if in much pain.

12*th*, 10 *A.M.*—Patient had slept 3 hours, and was sweating profusely; had passed some urine, but the bowels had not moved; the abdomen was greatly distended and tympanitic, causing pain in the wound and over the belly generally. I loosened the bandage and adhesive girth. She spoke of having felt much motion of the fœtus. Ordered oat meal gruel and beef tea as nourishment. Prescribed salts ℥ss. to be taken at once, and to use an enema in four hours; to continue the ten-grain opium powder, and use the fomentations as before; the vomiting had ceased.

Before evening her husband came for me, saying she was terribly bloated and suffering more pain, notwithstanding the powders had been given every two hours. I saw her about 7 P.M. She had had three profuse, thin, watery evacuations from the bowels, and was much relieved of the distension and pain. She was rational and bright; skin moist, pupil contracted, pulse 100.

13*th*, 9 *A.M.*—Patient sleeping; soon awoke and conversed cheerfully, expressing much gratitude for my services; had slept much during the night; was quite free from pain, and could extend the limbs a little; very tired of the bed, and wanted permission to get up; pulse 90; skin moist; eyes bright; tongue coated but moist; some appetite; allowed roast oysters, and prescribed 5 grs. opium in powder every four hours.

14*th*, 10 *A.M.*—Had slept most of the night; felt well, except pain and soreness in the wound; pulse 82. I dressed the wound for the first time, now five days since the operation. Found considerable swelling of the parts about the sutures, and withdrew them. The walls of the sac were apparently adherent, and I left it rolled up on itself as it had been; covered the whole with lint, spread with simple cerate, and an adhesive girth about the body. Prescribed a continuance of the 5 gr. powder of opium every four or five hours. She continued to improve, till twelve days from the time of the accident, when she aborted *at* or *about* the sixth month. I continued to administer opium, 15 or 20 grs. daily, occasionally combining with it acetat. plumbi

or tannin, or both, to correct a tendency to diarrhœa, which annoyed her after the miscarriage. I continued my visits *daily* till the 1st of September; after that *occasionally* for three weeks, during which time I gave opium largely. It was some weeks before she could extend her limbs sufficiently to stand erect.

This person has since given birth to a healthy child, and is herself robust.

The hernia, I may mention, never appeared after the operation.

PROCEEDINGS OF SOCIETIES.

Academy of Medicine. Regular Meeting, Oct. 1858, Dr. S. C. Foster, Vice-President, in the Chair.

Discussion on Puerperal Fever—(continued.)

Dr. Barker said: One year ago this evening I had the honor of offering to the Academy some remarks on the pathology and therapeutics of puerperal fever. Since that time this body has been mainly engrossed, during four of its sessions, by the consideration of this important subject. The Academy of Medicine in Paris have also been engaged in a most zealous discussion of the same subject for many months past, in which MM. Beau, Cazeaux, Cruveilhier, Danyau, Depaul, Dubois, Guerin, Hervez de Chégoin, Trousseau, Velpeau, and others have participated, a list of names comprising the first talent of that body. Many articles have also appeared in the French medical press, among which I should mention as specially valuable, those by M. Jacquemier, in the *Gazette Hebdomadaire*, and those by M. Behier, in *L'Union Médicale.*

I may also add, that during the last twelve months, my practical experience in this disease has been greatly enlarged both in hospital and in private practice, as we have not only had the misfortune of encountering it in the Lying-in Wards of Bellevue Hospital, but it has also been unusually rife in this city. From October, 1857, to October, 1858, one hundred and seventy-three deaths from puerperal fever have been reported at the City Inspector's office.

The following table gives the deaths from puerperal fever for each month, and it is interesting to note the parallelism between the deaths from this disease and erysipelas:

Disease.	Oct. 1857	Nov 1857	Dec 1857	Jan. 1858	Feb. 1858	Mar. 1858	Apr. 1858	May 1858	June 1858	July 1858	Aug 1858	Sept 1858
Puerperal Fever,.	5	9	14	17	26	21	21	19	13	13	9	6
Erysipelas,.....	4	6	16	13	20	14	23	21	8	13,	5	3

In Paris there has certainly been afforded an immense field for studying this disease, as in five years, 1852–56, 644 deaths have occurred, in six of the principal hospitals, from puerperal fever.

I may be pardoned for saying, that I have most carefully and conscientiously read all that has appeared in the French medical journals, and that I have observed, with the most earnest desire for truth, in order that I might correct any error in reasoning or deduction, into which I may have previously fallen.

Before alluding to some points, in regard to the pathology of this affection, I will give a very brief summary of the views of the principal speakers in the French Academy. The discussion originated with M. Guerard, who stated his belief, that so far as the nature of the disease was concerned, we must look for something beyond the mere local lesions, and that its phenomena cannot be explained by means of purulent infection. M. Depaul was the most able advocate of the doctrine of the essentiality of puerperal fever, although, instead of the term puerperal fever, he would prefer calling it puerperal typhus, or puerperal septicæmia. He believes that its essential character consists in a primary alteration in the blood.

In the autopsies which he has made, he has uniformly found the blood in this disease to possess a peculiar fluidity, and to be generally of a violet red color, easily impregnating and coloring the tissues. It often also presents a remarkably oily appearance, and coagulates with difficulty. He quotes from Vogel, (in Virchow's Handbuch,) who states that lactic acid confers an acidity upon the blood in this disease, and that in some cases carbonate of ammonia, in others the hydrosulphate, is found in it. The fluid loses its aptitude for coagulation, as do the globules to redden on the contact of air, and therefore their fitness for the respiratory act. The globules are in part decomposed and dissolved in the serum, giving it a reddish or dirty brown color. Scanzoni asserts that in some cases there is an increase of fibrin; in others, a true pyæmia, the constituent elements continuing in their normal proportions, and in others, again, a true putrefactive dissolution or septicæmia. M. Depaul regards the epidemic occurrence of this disease as presumptive proof of its essentiality. He, also, as do several of the

other speakers in the French Academy, refers to the fact, that the lesions of the solids are of the most varying character, and that in some fatal cases these do not exist at all, nothing being appreciable, save alterations in the blood. M. Beau considers puerperal fever as due to local inflammation (most frequently of the peritoneum,) united to an inflammatory diathesis depending upon an alteration of the blood—this alteration being an increase of the fibrin, a characteristic of inflammation. In the opinion of M. Piorry, the disease in question is primarily a metritis phlebitis or peritonitis, septicæmia or pyæmia. M. Caseaux also believes that it belongs to the phlegmasiæ. Jacquemier, Legroux, and Behier hold similar views. M. Bouillaud considers it due to purulent or putrid infection with an inflammatory element. Velpeau holds that it is a metro-peritonitis, a lymphangitis, or phlebitis (purulent infection,) modified by the puerperal state. Trousseau considers it as a phlegmasia of a peculiar kind due to a specific cause. Hervez de Chégoin sees in puerperal fever only the results of purulent or putrid infection. Dubois, Depaul, Danyau, and Guêrard were the only members of the French Academy who advocated the opinion that puerperal fever is an essential disease, not dependent at all upon local inflammation. M. Cruveilhier considers this disease as both a fever and an inflammation, and expresses his opinion in nearly the same words as Dr. Clark used in this Academy six months before. In common also with Dr. Clark, he regards the anatomical lesions as an essential feature in the disease. The following are his conclusions:

1. Puerperal fever is essentially a traumatic fever.

2. The special conditions in which the uterine and the entire organism of the woman who has just been in labor constitutes what may be called puerperal traumatism.

3. The essential anatomical characters of puerperal fever are peritonitis, sub-peritonitis, or purulent lymphangitis. Purulent uterine phlebitis is incomparably more rare than suppurative lymphangitis.

4. It is extremely probable that purulent inflammation of the lymphatic vessels is a cause of the intoxication of the blood in puerperal fever—but this intoxication does not manifest itself by visceral abscesses, as happens in purulent phlebitis.

5. The possibility of purulent infection of the blood by suppurative lymphangitis is not decided in a positive manner.

Now I do not propose to go over the ground of my former remarks, and give my reasons for believing that puerperal fever is an idiopathic fever, which originates from a poisoned state of the blood, and that the quasi inflammatory processes which generally occur in this disease are

in reality the results of poison, stirring up its peculiar excitement wherever it finds the proper amount of combined irritation and exhaustion to insure it a nidus, just as the poison of typhus fever awakens its pseudo-inflammations in the intestines, the lungs, and the brain. I will only express my belief parenthetically, that the lesions commonly found in puerperal fever are not due at all to inflammation, but to a pathological process entirely dissimilar and in many respects antagonistic to inflammation.

The whole doctrine of inflammation is now in a transition state. Whether the essential characteristics of inflammation be, as Professor Bennett says, an exudation of the normal liquor sanguinis, or in the words of Professor Alison, inflammation is altered nutrition, it seems to me that the lesions found in puerperal fever, indicating destructive disorganization, are of an entirely different character. I should not allude to this point were it not for a strong conviction that pathological errors in these particulars have led to grave therapeutical errors. There has been one striking difference between the discussion in the Academy of France and this body, and that is, that in the former the great majority who have spoken have advocated the doctrine that the phenomena characteristic of puerperal fever are the results of a local phlegmasia, while this view has not found a single advocate here. Holding the views I do, I must regard this as a matter of mutual congratulation. But there is another point which has not only an important bearing on this question, but on general pathology, and is equally interesting to the obstetrician, the surgeon, and the physician, on which I beg leave to dwell for a few moments—and that is the question of purulent or putrid infection, or of pyæmia and of septicæmia.

As regards this subject, there is a great harmony of view between one of our members, who has taken the most prominent part in this discussion, and several of the distinguished speakers in the French Academy. In order that I may do full justice to Dr. Clark, I quote from the *New York Journal of Medicine*. Dr. Clark said, "It was his object, on a former occasion, to show that these cases" (the cases which, in the belief of Simpson, Gooch, and others, were without lesion of any kind—a simple fever, the poison of which overwhelmed the vital powers,) "were no exceptions to the general rule, but that they were really marked by inflammation, like the others, but that the inflammation was one that had escaped detection; that it was an endometritis, and that the inflammation affecting the inner surface of the uterus involved the open or valvular mouths of the uterine veins, and might produce purulent contamination of the system, while no pus was found

in the veins themselves after death. The evidence of this was in the inflammatory exudation on the inside of the surface of the uterus; the redness of the uterine structure, penetrating a minute distance from within outward; the symptoms of pyæmia and the discovery of pus in distant organs. To present this idea was the chief object of his former remarks, and to give it distinctness he had referred to and recognized the then commonly described inflammatory lesions, viz., the peritonitis, the purulent phlebitis in the uterine sinuses, and the purulent inflammation of the uterine lymphatics. These, together with endometritis, he had stated were the primary *inflammatory* lesions, and that there were other organs subject to inflammation in a subordinate and secondary degree." In another place he asks, "whether the shortest time" (in which the most malignant form of puerperal fever destroys life) "is not long enough for endometritis to produce fatal contamination of the blood? or, in other words, in what time purulent infection can overwhelm the vital forces?" After giving a condensed summary of the experiments of Sedillot, in injecting laudable and fœtid pus into the veins of dogs, Dr. Clark remarks, "the import of these experiments, and their relation to the disease we are considering, hardly require comment, especially when it is remembered that the uterine cavity is open to the ready access of air; that when inflammation is recognized on its inner surface, it has often been of a character most likely to furnish a sceptic agent, healthy or degenerated pus, in an augmented, and consequently accumulated stream." These extracts show the importance with which Dr. Clark regards purulent contamination and putrid infection in developing the phenomena of puerperal fever. In the French Academy, M. Velpeau endeavored to prove that it results from purulent infection, and Hervez de Chégoin, that it is due to putrid infection. In my former remarks I expressed a doubt whether pus, the product of simple ordinary inflammation, if absorbed or washed into the circulating blood, will produce the symptoms which we call pyæmia, or whether, in fact, another element besides laudable pus is not essential for the production of these phenomena. As to the effects of putrid pus when mingled with the circulation, there is no doubt, for this has been demonstrated by the experiments of numerous competent observers. But with Dubois, I hold that neither purulent contamination nor putrid infection have anything to do with the development of the disease, but that it results from a special poison of the blood, the essence of which is unknown, but the effects of which are very manifest. I believe this to be true of all that class of cases called pyæmia, whether puerperal, traumatic, or idiopathic, and that the

extensive and disseminated suppuration are a result of this poison, and not a cause of the disease. The doctrine generally accepted, is, that purulent contamination originates in a phlebitis. Now, simple phlebitis alone is not a disease of great severity. It is often met with wherever there is a traumatic injury or solution of continuity, and it may involve the whole extent of a limb without any great danger, and very rarely has a fatal termination. But sometimes comparatively trivial causes, very slight injuries, are followed by a train of symptoms, the aggregate of which constitute pyæmia, and terminate fatally. Trousseau mentions, that at the Hôpital Clinique, in the service of M. Cloquet, four patients died after the following slight operations, one resulting from forced catheterism, another from depressing a cataract, a third from a slight incision for fissure of the anus, and the fourth was a woman who had a slight incision made in the arm for the extraction of a needle.

Puerperal fever was prevailing in the hospital at this time in the service of M. Dubois. Parallel facts have long been observed by surgeons, and I think I may safely refer to the surgical members of this body to confirm the statement, that during the past winter and spring there has been an unusual tendency to the development of pyæmia. How can such cases as the above be explained by the doctrine of purulent contamination? It is a matter of common observation that large abscesses are absorbed and eliminated without occasioning so-called purulent infection. Dr. Bennett relates a very interesting case of pyæmia, terminating fatally, following acute articular rheumatism. Pus was found in the head, the chest, and the joints. There was no phlebitis. Dr. Watson, in his lectures, relates two cases, in which the autopsic results were strikingly like this, but the constitutional disease was preceded by otorrhea and abscess in the ear. Pyæmia is a very rare and exceptional result of the traumatic lesions above mentioned, and equally or more so of the diseases referred to, viz., acute articular rheumatism and otorrhea. Neither is it one of the natural terminations of endometritis, uterine phlebitis, or suppurative inflammation of the uterine lymphatics, nor is there any reason for believing that these diseases are liable, when not associated with some other morbific element, to produce fatal contamination of the blood. I cannot, therefore, see what bearing the anatomical structure of the uterine sinuses, on which Dr. Clark laid so much stress in his remarks on the first evening in which he discussed this subject, has upon puerperal fever. Even if those cases described by Gooch, Locock, Simpson, and others, as without lesion, were cases of pyæmia, it does not follow that the pyæ-

mia had its source in the inflammation of the inner surface of the uterus. If the more careful and microscopic examination of modern times had been able to reveal the existence of pus in minute quantities in the uterine sinuses, it does not follow that this pus was the source of the fatal contamination of the blood. It must be remembered that these sinuses constitute a special vascular apparatus, pertaining to the utero-placental circulation, and disappearing when complete involution of the uterus has taken place. Admitting, then, the doctrine of purulent contamination as ordinarily received, pus found in these uterine sinuses must have a very trivial influence on the general system as compared with pus found in the crural, the ovaric, or the iliac veins. Furthermore, microscopic investigations have proved, as Trousseau asserted, and Dr. Clark the other evening admitted, that the absorption of pus is a physical impossibility, the pus globules being larger than the calibre of the capillaries. In the cases of absorption and elimination of the pus of large abscesses before alluded to, the pus corpuscles must first be disintegrated and reduced to a fluid condition. The doctrine of putrid infection is equally untenable. If the retention of a certain quantity of liquid or coagulated blood can produce toxæmia and the effects supposed to be due to this, then a natural, constant, and inoffensive condition would be converted into a permanent and formidable danger, for there is no hæmorrhage attending labor which is not followed by putrid infection, as there are always some clots retained and altered in the genital passages. These are briefly my reasons for rejecting the doctrine of purulent contamination as the source of puerperal fever. I do not, however, wish to be understood as asserting that there are no cases of putrid infection which destroy the life of the puerperal woman, for the contrary is my belief. It does sometimes occur from the retention of a portion of the placenta, or of clots which are decomposed within the cavity of the uterus, and in some rare instances from gangrene of the internal surface of the uterus. One case of the latter occurred in my service at Bellevue Hospital. But these cases are quite distinct from puerperal fever, and the differential diagnosis is very easily made out. No one practically familiar with puerperal fever as an epidemic or a sporadic disease, would confound them. In putrid infection the chills are very slight, and recur irregularly and frequently. The tongue is dry and cracked, the teeth and lips are covered with sordes, the countenance exhibits a peculiarly haggard and frightened expression, and hectic fever and colliquative diarrhœa appear at an early period. There is also usually marked subsultus, insomnia, muttering dilirium, and abdominal meteorism without pain.

The lochial discharge is always extremely offensive. It sometimes is absent, but when this happens, a vaginal examination will give unmistakable proof of the odor of putrescence.

Any or all of the above symptoms may be absent in puerperal fever, and they are never found combined in them entirely. The lochia, for example, is sometimes suppressed suddenly without producing any symptoms, or it may continue unchanged in quality or quantity. It may, to be sure, be very offensive, but this is unattended with the symptoms above enumerated as pertaining to putrid infection.

Puerperal fever, then, is something more and something different from purulent contamination or putrid infection. It is a constitutional disease, primarily acting on the blood. To parody the words of Dr. Meigs, "the constitutional affection leads the train, and brings on the topical lesions after an indispensable preliminary incubation." There is a uniformity and constancy in its symptoms which bears no relation to its local lesions, which are infinitely varied, and in some well-authenticated cases no palpable lesions have been found. If they existed, they were too trivial to explain the severity, and intensity, and rapid progress of the constitutional reaction. Pus is found in the veins, the uterine tissue, the lymphatics, the peritoneum, the pleura, the pericardium, the articulations, the muscles, and the cellular, and even the epidermic tissue. M. Charrier describes one epidemic at the Hôpital Lariboisiere, in which the first half were characterized by the peritoneal lesion, in the second half lesions of the pleura were the uniform rule, and it was rare that lesions were found of any of the organs specially associated with parturition. Each epidemic has its special characteristic as regards the topical lesions. M. Dubois observed one epidemic, in which all who died were found to have perforation of the intestines. M. Danyau, in another epidemic in 1829, found a constant alteration of the mucous membrane of the large intestine in its whole extent, the lesion being a solution of continuity, as if made by a punch. A careful study of the history of the numerous epidemics which have been described, proves that the variety of local lesions predominating in each is exceedingly great, while there has been sufficient uniformity in the symptoms, as a whole, to characterize it as being different manifestations of the same disease.

I now pass to a consideration of the therapeutics of this disease. This is the cardinal end of the study of all diseases. The discussion in the Academy of France has been utterly fruitless as regards this point, as they have added literally nothing to our knowledge of the proper mode of treating puerperal fever. In this respect I think it is not too

much to say, that the discussion in this body contrasts most favorably with that of our foreign namesake. The heroic use of opium and its preparations, in that variety of puerperal fever characterized by the peritoneal lesion, first signalized by Dr. Clark, and the use of the veratrum viride as an arterial sedative, has and will, I do not hesitate to say, diminished the fatality of this terrible disease by a marked per centage.

Most of the French speakers distinctly avow their skepticism as to the value of any treatment for the cure of puerperal fever. The exceptions are M. Depaul, who has found his most favorable results from the free use of mercurials; M. Velpeau, who has strong faith in the value of mercurial inunctions; and M. Beau, who is enthusiastic in his encomiums in regard to the value and importance of the sulphate of quinine in the treatment of this disease.

Now it seems to me that each school of the French—those who have advocated the essentiality of the disease, and those who consider the fever as symptomatic of local inflammation—have equally failed in their therapeutic efforts for obvious reasons. The first have apparently been seeking for some specific in puerperal fever, some antidote for the blood poison, which they would use in an analogous way with the use of the hydrated peroxide of iron in poisoning from arsenic, while the other school are vainly seeking some antiphlogistic course which will overwhelm the imflammatory action. Now there are no specific therapeutics for puerperal fever, any more than there is in yellow fever or in typhus fever. The type of the disease varies to an extraordinary degree in different epidemics. Sporadic cases require very different management from epidemic cases, and the constitution of different individuals attacked, and the tolerance of diseases, differs to a still more extraordinary extent. There is no disease which requires such acute discrimination in the adaptation of means to an end, none which requires a sounder judgment or more incessant watching to combat every assault which exhausts vital power.

On a former occasion, I very briefly alluded to the principal indications in the treatment of this disease. I propose now to examine more in detail the agencies we have the control of in fulfilling these indications. The first indication is to eliminate from the system as much of the morbid poison as possible, by means of depletion and the other evacuants, as purgatives, emetics, diuretics, etc. I said that unfortunately this indication, owing to the peculiar character of this disease, can rarely be fulfilled, except to a limited degree. The effects of the poison are developed so rapidly, that the patient will not bear the use

of such means, and it is the effects that we are obliged to combat. Within the past year I have twice resorted to venesection in puerperal fever with most satisfactory results. Both patients were young and plethoric, and the toxæmic influence was strikingly evident in producing great cerebral disturbance. I bled for the same reason that I would bleed similar subjects in uremic convulsion. I would here incidentally suggest the inquiry, whether the type of disease is not again becoming more sthenic, or whether there has not been an epidemic tendency to cerebral congestion. Within the past twelve months I have bled thirteen pregnant or parturient women---more in the aggregate than I have bled for the seven years before. I may also add that I believe I have had authentic accounts of the death of twenty-one from this cause in the same period of time. I will add nothing to my former remarks in regard to venesection in puerperal fever.

Purgatives I have rarely used in this disease, for I have regarded tympanites as a contra-indication for their use, and in many cases there has been a remarked tendency to diarrhœa, which sometimes has been difficult to control. In some few cases, where there was evident obstruction of the portal circulation, or there was reason to believe that there was intestinal irritation from previous constipation, I have given an active cathartic of calomel, rhubarb and nux vomica In a later stage of the disease also, when the patient has been supported by a liberal use of beef tea and alcoholic stimulants for some days, there sometimes comes a period when the digestive apparatus refuses to take up what is put in the stomach, a mercurial laxative has had a most happy effect in unloading the portal system, and relieving the congestion of the capillary circulation of the mucous membrane of the alimentary canal, and the patient at once is able to assimilate what is taken into the stomach.

Emetics were at one period regarded as a specific for puerperal fever, but now they are rarely used. In three cases I have decided on their use. The disease was ushered in by recurring chills, nausea and bilious vomiting, with a marked icterode hue of the skin and conjunctiva. The agent selected was the Turpeth mineral in five-grain doses, which acts very promptly without producing prostration. But, on the contrary, in these cases they professed to feel less weakness after vomiting, and the symptoms which induced the selection of an emetic were at once relieved.

The second indication mentioned was to control the vital disturbances resulting from reaction. These are principally vascular excitement and nervous irritation. The value of veratrum viride in reducing vascular

excitement has in this disease been confirmed by many observers in this city, and my own additional experience. It will most surely reduce the quickened pulse of inflammation and irritation. Its use is not incompatible with that of stimulants. Experience has abundantly demonstrated the truth of this apparent paradox. One patient who recovered took, every hour for two days, one ounce of brandy and three to ten drops of the tinc. veratrum viride, the quantity of the latter being determined by the frequency of the pulse, which was never allowed to rise above 80 per minute, although it sometimes fell down to 40. In another case the veratrum viride did not seem to produce any effect on the pulse, which remained steadily above 130, until the condition of the patient was such that I decided to give brandy. After the first ounce was given, it fell to 108; after the second, to 86. Continuing the brandy, the veratrum viride was suspended for a few hours, and the pulse again rose to 130. After this it was curious to note the fact, that if either agent was suspended the pulse would rapidly increase in frequency, while under the combined influence of the two it was kept below 80 per minute. I have little to add to what has already been said on the use of opium in puerperal fever. In all cases it should be given to the extent of entirely subduing the pain. When the peritoneal lesion predominates, it is the principal agent on which we must rely, and the quantity in which it is to be administered is only to be determined by the effect which it produces.

Third, to combat the local secondary lesions which may be developed. This indication implies the use of a great variety of means, which will often tax the resources of the medical attendant to the utmost. I have already spoken of the value of opium in the peritoneal lesion. The tympanitis is often the most striking and distressing symptom, and I regret to say that I know of no treatment by which we can always be sure of relieving it. I rely, however, mostly on the use of turpentine, internally and endemically. In some cases I have seen good results from the use of the acetate of lead, and in others I have seen all means fail. In those cases where the secondary lesions are developed in the uterus, its veins, or its lymphatics, I have seen no advantage from leeching or blistering. The exposure of the abdomen to the air more than counterbalances the problematical advantages resulting from the former, while the latter only adds to the nervous irritation already existing. In these cases, the only local treatment I make use of is chlorinated vaginal injections repeated several times a day, and hot linseed meal poultices kept constantly applied over the hypogastrium.

Fourth, to sustain the vital powers of the system. I believe more

patients die from the neglect of this point than from any other error of treatment in this disease. The patient is often sacrificed by a contest between the doctor and the disease, both contributing to exhaust the vital powers. In very many cases remedies are utterly powerless in combating the disease, and the province of the physician is to keep the patient alive until the disease is exhausted. This can only be done by proper nutrition, and the prevention of waste, and the restoration of nerve power by the use of alcoholic stimulants. I will not enlarge upon this point; but I still believe that when a patient with puerperal fever has lived for forty-eight hours, there is a constant encouragement for effort, and that the danger is in a certain sense diminished in proportion to the duration of the disease. I will only allude to two points of practice which seem to me of some importance. The first I have already mentioned—the value of a mercurial laxative when the patient has been supported for some days by the liberal use of beef tea and alcoholic stimulants, until the stomach loses the power of taking care of what is put into it, apparently from obstruction of the circulation and congestion of the capillary circulation of the mucous membrane of the alimentary canal.

There is another class of cases where the stomach seems to give out all at once from another cause, which I will not undertake to explain. Everything is rejected in a few minutes after it is swallowed, with a painful feeling of burning and excoriation. Now, if the condition is not changed the patient will soon die, as she can no longer be sustained. I have in several instances been able to persuade the stomach to resume its functions, by adding to each tablespoonful of beef tea one drop of nitro-muriatic acid, the proportion of the mixture being one part of the nitric and two of the hydrochloric acid. I will no longer ask the attention of the Academy, but will conclude with the expression of the hope that other members will give us the benefit of their clinical experience.

Dr. Gardner then made the following remarks:

Mr. President—In common, I doubt not, with you and the members of the Academy generally, I have listened with great satisfaction to the Professors Smith, Clark, and Barker, in their full and lucid statements respecting the etiology, pathology and therapeutics of puerperal fever; I have read, too, the full resumé of kindred debates upon this same subject at the meetings of our illustrious namesake, the Academy of Medicine at Paris; and I may, perhaps, be pardoned *here*, Mr. President, if I state that I have felt no little access of national

pride in instituting a comparison between these debates ; for here the anatomical facts and the pathological deductions of Prof. Clark, and also his heroic opium treatment, and the more novel treatment of Prof. Barker with the veratrum viride, have at least added something to the sum of knowledge on these points, given us food for thought, and a stand-point (even if a little boggy and uncertain) from which to start for fresh investigations in a somewhat different direction from that which we have been following. The debates of the French Academy have been truly flat, stale, and unprofitable, without a new point made, unless I include the mention there of the opium and veratrum viride treatments.

Still, Mr. President, it seems to me, that even when so much has been done, more might still be effected, and I venture to intrude my few remarks upon the attention of the Academy, not with the expectation of personally adding to the common fund, but in hopes by drawing attention to another side of the question, to elicit new opinions, perhaps, upon old matters. We have heard but little said of the treatment of puerperal fever, except by new methods. Puerperal fever is no new disease; it dates far back in time, for we have monographs upon this subject dated as early as 1659, by Willis, Hake, and Berger. In 1746 puerperal fever prevailed in Paris, chiefly at Hotel Dieu, where scarcely any recovered from it, as might be supposed by any one who has ever seen the ill-ventilated wards of this renowned hospital. The post-mortem examinations there revealed large amounts of albuminous exudations in the peritoneal cavity, appearing like coagulated milk on the surface of the intestines, with a copious effusion of whey or milk-like serum; wherefore effusion was viewed as a metastasis of milk, and hence it was for a time considered as milk-fever, although a closer attention would have shown that the milk is rarely entirely arrested.

But, as I was proceeding to remark, little has been said in this Academy respecting the treatment of this disease, except to suggest novel methods of treatment. It cannot be possible that there is nothing good in the prophylaxis and therapeutics in general use for the last two centuries! The results may not have been what is desired, but certainly there must be something good in it all! For my part, I do not believe in the opium treatment or the veratrum viride treatment as treatments, while I am willing to accord to both of these powerful remedies a place in the list of medicaments appropriate to some of the ever-changing symptoms of this, in certain situations, very fatal disease. I see in opium a powerful narcotic, efficient in relieving the

intense pain often present, and for this I would administer it till the pain is overcome, even if compelled to exceed the immense doses which Dr. Clark, as well as Dr. McNulty in his paper on opium lately read here, has proved the human constitution is able to safely withstand. I see in both opium and veratrum viride an agent effectual in calming the vascular excitement, but not to cure the *cause* of this excitement, for this is still found to be present when the calming potion is removed. Veratrum viride I am ready to give experimentally, empirically, but not with any idea of its specific qualities, as a curative agent. They both act as palliative to inflammatory symptoms; they serve to remove the *vis a tergo*, to restrain the action of the heart from sending more blood to the already gorged and diseased tissues.

For specific remedies I am compelled to stick to the old treatment, notwithstanding my dissatisfaction with it—my unwillingness to follow a course that will not save *every* patient. I am obliged to hold on to it until something better is offered for my adoption. Calomel is the only reliable sheet anchor that I have found. It is the mercurial only that will defibrinate the blood, when the inflammatory symptoms are the most serious. It is the mercurial alone that is powerful to eliminate the subtle *materies morbi* in those less fearful looking, but more dangerous forms of this disorder where the springs of life are destroyed by secret and hidden disease, traced by Dr. Clark to its lurking places in the obscure ampullæ of the internal uterine sinuses. Theoretically, calomel is the remedy demanded; no medicine acts so efficaciously upon all inflammatory affections of all serous membranes, whether it be of the brain, the lungs, or the peritoneum; no medicine more surely destroys morbific poisons than the mercurial; no treatment is more potent to diminish the abnormal plastic elements of the blood, or to restore the hyperæmic tissues and organs to their proper, healthy condition. Still I do not consider that calomel is a positive agent. As in scarlatina, the invasion of the disease is sometimes signalized by such terrific aggravation of every and all symptoms united, that before the system can be brought under the influence of any form of treatment the patient is lost—so intense occasionally become the inflammatory symptoms, that the most vigorous treatment will not overcome them; for I have seen women after several days' sickness die, when profusely salivated—a fact denied by some, but which I have seen, though in but one instance that I can recall with distinctness.

The mercurial treatment, then, is in no wise to be neglected; combining, as may be necessary, opium, or the veratrum viride, to any de-

sired extent, yet remembering that in so doing you are administering no curative agent; that the opium but imitates the treatment of the surgeon, who applies splints to a broken leg, producing quiescence and relieving pain—the puerperal poison is still there, and till that is eliminated, you have only made your patient comfortable, and perhaps but soothed her passage to the grave.

But before any action can be expected from mercurials, there is time and occasion for other treatment. The disease sometimes is apparent before or during parturition. In the case of a woman whom I delivered by craniotomy, after several days' labor, there was no subsidence of the abdomen after the removal of the child, weighing 8½ lbs., and the secundines, but it remained tumid, tympanitic, and the woman was finally enumerated as one of the unsuccessful of Dr. Clark's cases of treatment by opium; the woman dying of hæmorrhage on the sixth day after.

Topical depletion, when severe inflammatory symptoms are present, I have great faith in. Forty or sixty leeches upon the abdomen, with perhaps a repetition of half that number in from 12 to 48 hours, I have known beneficial, but I have no faith in general bleedings to any amount, or in the application of ten or twenty leeches. If any benefit is to be derived from them, they must be sufficiently numerous, if not to overwhelm the disease, at least to markedly affect it.

I attach more importance to turpentine than to any remedy after calomel. What the extent of its therapeutical powers may be I am not prepared to fully define. I believe them to be very great, and very little appreciated by the profession. In one case of ruptured uterus, I consider the life was saved by application of this agent alone. Whether administered by the mouth with the yolk of an egg in ten minim doses every hour, or applied constantly for forty-eight or seventy-two hours to the abdomen, or internally and externally united, I have seen results forcing me to believe in its specific properties.

The secondary affections, the results of pyæmia, are not peculiar to puerperal fever, and need not be especially considered in this category.

Considering it both desirable and becoming that all who have any especial interest or experience in this class of diseases should lay their views before the Academy, I have offered these few remarks.

New York Pathological Society. Regular Meeting, April 14, 1858. E. HARRIS, M.D., *Vice-President*, in the Chair.

[Reported for the MONTHLY, by E. LEE JONES, M.D., Secretary.]

Ulceration of Appendix Vermiformis.—DR. D. S. CONANT presented a specimen of ulceration of the appendix vermiformis removed from a young man, student in the Medical College, Brunswick, Maine. Shortly after eating a piece of mince pie he was seized with colic, which lasted several hours. The next morning, Wednesday, he was called to see him, and found him suffering a great deal of pain in the abdomen. He ordered opium to quiet the pain. He was better in the course of an hour or two, and improved until Saturday, when he had a very severe chill, and three or four chills every day after. His pulse was only 75 or 80; had very little, if any, fever; his mind was perfectly clear, he only felt a little weak. This state of things went on for three weeks, when about the middle of one Saturday night he commenced sinking, and complained of some slight pain in the right iliac region. Attention being directed to that region, it was examined thoroughly, and a little dullness on percussion was discovered, just above the crest of the ilium on the right side, extending almost down to the pubis. From this it was concluded that there was an abscess forming at that spot. He continued to sink until the Tuesday morning following, when he died.

Autopsy.—Abdominal cavity perfectly healthy until we came to the right iliac region—very little plasma upon the peritoneum at that spot. Behind the cæcum there was an opening three-quarters of an inch in diameter, which opened through into the peritoneum, and led into a large cavity, holding a pint of blood clots between the bladder and rectum. The appendix vermiformis was found destroyed, or ulcerated off, close to the cæcum. Here is seen a small portion of the upper wall of the abscess, as well as the opening into the head of cæcum. In the lower cavity was found a bean, right over the ant. crural nerve.

Perforation of Appendix Vermiformis—Peritonitis.—DR. G. T. ELLIOT, Jr., presented an instance of perforation of the appendix vermiformis. It occurred in a patient eleven years of age. It is interesting from the nature of the treatment, which consisted particularly in the exhibition of opium. The patient was a very healthy active lad, notwithstanding his puny appearance; had never before been sick. He got up on Wednesday morning last, feeling rather unwell, so much so that the domestics remarked it. He went out as usual in the morning, but while at play with his companions received a blow in the stomach, that rendered him breathless for a time. That day he hurried

through his dinner, which was a simple one; he soon after, however, vomited it up, and then pain came on. Various domestic remedies were resorted to, but with no good effect; and the night of the next day, the pain increasing, I was sent for, and found him with an anxious expression of face; very rapid pulse; respiration thoracic; complaining of pain, which was paroxysmal, over all the abdomen. He had been at the gymnasium lately. Hernia was suspected, but none found; administered a dose of oil, stating that I would call again in the course of two or three hours. The oil operated before I returned, three times. The last two passages were attended by a great deal of pain, and inability to make any voluntary effort. He was afterwards carried, helpless, to bed. Convinced that peritonitis existed, a teaspoonful of paregoric, and six leeches over the abdomen, were ordered. Dr. Clark was called in consultation, and confirmed the diagnosis. The application of the six leeches relieved him very much indeed; before, he could not assume the ordinary position—now, he was able to stretch himself out in bed. His pulse had fallen 10 beats, and his general expression was entirely for the better. The opium plan of treatment was resolved upon, and carried out pretty effectually. During the night I decided to give solid opium, thinking, perhaps, by so doing the stomach would be less irritable. Gave him opium enough to induce sleep through the whole night, and when he woke up he felt better. After Dr. Clark left, he had to assume the position common in peritonitis, thighs flexed upon the pelvis; he still maintained that position. During the next day the treatment was steadily pursued, and in the evening Dr. Clark saw him with me again. His respiration, which had been 30 before, now fell; his pulse also. Tenderness of abdomen not so much complained of as before. Auscultation detected no movements of the intestines. He passed his water with difficulty; sometimes, after waiting a time, with comparative ease. There was then no tympanitis or tension of the abdomen. We decided to substitute laudanum for the solid opium that night. We gave the beef tea, at least it was endeavored to be given by the tablespoonful every hour during the night. He had only drinks before that. On Friday night a blister, 3x4, was directed to be placed over the abdomen. Laudanum was steadily given in such quantity as to free him from pain, and allow him to sleep comfortably. When he was awakened his intellect was perfectly clear and fresh. He went on in this way till Saturday without any marked change—if any, he was better. On Saturday evening his respiration was about 28 and pulse 116. We continued to pursue the same treatment. On Sunday morning the respiration was brought

down to 12 in a minute. There had been a little tympanitis up to this time, which had increased somewhat over the transverse colon, but it was not marked, considering the disease; a little borborygmus was noticed. The treatment was pursued all Sunday. In the evening there was noticed a tendency in the pulse to fall—at one time down as low as 80 or 90. This tendency to fall was noticed the next morning, when it was at 92, and continued so until just previous to death. On Monday, 4 P. M., he vomited for the first time some beef tea, which was then discontinued. More opium given; returned after an hour and a half, to see him about to die. His hands were cool, pulse 120; respiration thoracic and very hurried; expression haggard and pinched; abdomen decidedly more tympanitic; vomiting of coffee ground material. He complained now of some pain; all this time he was in the perfect enjoyment of his senses. We gave him some stimulants, when his pulse would come up a little, and then merely flicker. He sank steadily; mild delirium set in, from which he would recover when he was wakened. At 12, midnight, his pulse was at his elbow, and he lingered until about six o'clock in the morning. He vomited persistently, at one time was quite delirious, but died in the unclouded possession of his faculties.

In examining him on the first day, I inquired if he had swallowed anything that might have got into the appendix vermiformis. No increased tenderness existed at that point then or afterwards.

Autopsy.—Ten hours after death—*Abdomen.* On removing the intestines carefully, they were found to be much distended with air, and agglutinated together. As we passed down in our examination they became more and more agglutinated as we approached the right iliac fossa. Here they were covered pretty generally with lymph. Some sero-purulent fluid escaped at this point, and presently a large cyst was found on that side (right), formed by tissues containing pus of a faint gangrenous odor. At one point we saw two or three grains of feculent matter, the largest about the size of a split pea. No gas escaped from the abdomen when it was opened. Perforation of the appendix vermiformis was found, and great intensity of inflammation existed in the pelvic region. Collections of pus were bound down by adhesions in two distinct spots. The bladder was empty and firmly contracted. The appendix vermiformis is seen attached to the cæcum by adhesions. The portion here about half an inch in length, the appendix vermiformis felt somewhat hard to the touch, and its calibre is somewhat distended. Below this point a perforation is very evident indeed. The patient took, during the whole treatment from Thursday

until the following Monday afternoon, nearly 21 grains of opium, which in this terrible disease afforded such a relief of pain as to allow him to sleep, his intelligence to be unclouded, and to have no headache during all the attack.

DR. A. CLARK observed that the prominent point of interest in this case, to him, was the entire absence of any sign by which we could determine where the inflammation began, or what was the probable cause; and after death, considering perforation out of the question, he felt that opium had betrayed us this time. When he went into the room for the post-mortem examination he had the feeling that he would not, himself, be responsible for opium in these little ones, inasmuch as he had lost one before, also, under very afflicting circumstances. But when the post mortem revealed this all but unconquerable disease, he felt that it was not so much the fault of opium as of the disease itself. The point that struck him forcibly was that we did not know whether there was more pain in the iliac fossa or not.

In another case that he had seen within four weeks the effects were quite different, i. e., if a correct diagnosis had been made. He saw a little child with Dr. Cadmus. She had suffered some days with pain in the iliac fossa, and a little above it. The doctor told him that there was an unusual hardness there for some days. There was then tenderness over all the abdomen. It was a child 10 years of age. She was suffering excruciating pain—it was even excruciating to hear her cries, which were sometimes prolonged for ten minutes together.

There was dullness on percussion over the right iliac region, also a doughy feel. Respiration 40, pulse 130.

She was seen again the next day, and in the mean time had taken as much opium as would afford relief from pain. On examination into the condition of the abdomen, tympanitis was tolerably marked, with a considerable degree of hardness in the right iliac region; pulse still pretty high, respiration pretty frequent, but tenderness mostly gone. The treatment was persisted in for four days more, when the pulse fell down to 85, if he remembers right. From that time it kept on gradually decreasing until convalescence was established. Now the doctor informs me that there is still a hardness recognizable in this iliac fossa, but much less marked. I suppose that the series of symptoms can be accounted for in no other way, except that perforation has taken place at that spot, peritonitis occurring also at that spot to seal in the centre of the disease. Here, then, was a case that was cured by the treatment that failed in Dr. Elliot's case.

DR. J. T. METCALFE thought that Dr. Clark's case was not conclu-

sive to his mind, nor did he believe that we can ever tell the difference between peritonitis, which is secondary to impaction of the cæcum with fæces, and that which takes place as a consequence of peritonitis, such as Dr. Elliot's case. The great difference in these two classes of cases is in their termination; cases of perforation of the appendix vermiformis are almost always fatal, while the other class not unfrequently get well. Dr. M. had several cases similar to the one cited by Dr. Clark, and from the manner they yielded to opium, antiphlogistics and counter-irritation, he suspected they were nothing more than impaction. He had only seen one case of true perforation recover, and he presented it to the Society, some 8 or 9 years ago. In this case the patient died of some other disease. He stated that there were a great many cases where it could not be told whether there was perforation, and even if this was known it would do very little good; there would be very little if any hope of cure.

Dr. Clark observed, as regards the probability of cure in these cases, his mind has been made up, and he is not skeptical as regards evidences. He was prepared to meet the testimony of such men as Graves and Stokes. It had been his fortune to treat one case of typhoid fever up to the end of the third week, and to discover a sudden lighting up of fever, increase in the pulse, pain first appearing in the right iliac region and then rapidly spreading over the whole abdomen, and with all this well-marked tympanitis. He treated that case with opium and it got well. He could not divest himself of the idea that in this case the peritonitis was the result of perforation.

Dr. Metcalfe would not deny the possibility of a cure in these cases, and referred to a case that occurred to him while physician at the New York Hospital, where a man presented precisely the symptoms related by Dr. Clark, and who died. On post-mortem examination, there was not the slightest lesion of the coats of the intestines. This was ascertained by filling it with water. There was merely an abscess in the right iliac fossa. This only went to strengthen his mind in regard to the extreme difficulty of being certain in the diagnosis of these cases.

Dr. Clark said that, in his case, the pain began at the part where a perforation would be most apt to occur; that the pain continued for an hour in that one spot. As regards the perforation in adults suffering from typhoid fever, Dr. Metcalfe was aware that peritonitis, without this perforation, was one of the rarest things a physician is called upon to treat. He had never seen but one fatal case of this

kind without perforation, and it had been his fortune to see a vast deal of this disease.

Dr. Clark asked the opinions of Dr. Lewis upon the subject, he having seen a great deal of this disease.

Dr. Lewis, in connection with the case of Dr. Metcalfe, referred to one treated by Dr. Warren, of Boston. The patient had a tumor on the right flank, which was attended with peritoneal inflammation. He recovered, but the tumor did not decrease; it continued in that condition for two or three years, every now and then lighting up a new inflammation. He eventually died, 4 or 5 years from the first attack, with perforation of the vermiform process. Dr. Warren supposed at the time, from the appearances, that this tumor was in reality an abscess of the vermiform process. This, he believed, was proved by an autopsy. He next referred to a case of supposed perforation into the abdominal cavity. The patient was a subject of hernia. The appendix lodged in the inguinal canal, formed an abscess which ulcerated and discharged a portion of bone on the outside. The patient died afterwards of some other disease. There is still another case which was supposed, and with very good reason, to be perforation in the abdominal cavity. An abscess was formed and a foreign substance discharged through the abdominal walls. The foreign substance discharged had every appearance in form and shape of coming from the cæcum. The patient recovered. This is reported in some one of the English journals. In reference to the difficulty of localizing the disease, he stated that it was very uncommon to have the attention directed to the right iliac region. In forty odd cases that he had collected, one third of them presented nothing to draw attention to that point.

Dr. Markoe referred to a case where treatment had succeeded in curing peritonitis which was the result of perforation. It occurred in a child. Pain was at first localized in the region of the cæcum; in twenty-four hours afterwards symptoms of general peritonitis came on. By leeching and opium, the symptoms were entirely controlled. In a month after, the child dying of another trouble, the post-mortem examination showed perforation of the appendix vermiformis to have taken place, which produced peritonitis, which was evinced by the intestines being bound down at different spots. He considered it as a case of peritonitis entirely cured, the evidences of which were indisputable.

Rupture of Right Ventricle.—Dr. J. R. Leaming presented the following history of a case: On Tuesday morning, the 6th of April, R. P., a native of England, 32 years of age, a plasterer by trade, called

at my office. He said that within a few days he had been attacked suddenly, while walking, with pain in the chest, which was so severe he had to sit down till it passed off. He could not walk a block without having an attack. I examined his chest by percussion and auscultation, and found nothing wrong. He was a medium-sized, muscular man, and had enjoyed pretty good health, with the exception of biliousness. Believing the attack was nervous, caused by gastric derangement, he was ordered a simple laxative. The next morning, (Wednesday,) I was sent for to see him at his residence. He was lying on the bed, said he felt perfectly well, but had an attack coming up stairs that morning, and he though best to see me before going out. He then told me he had forgotten to mention at the office, that the week before, on Wednesday, 31st of March, he carried a heavy centre piece of ornamental plaster work from his shop in 4th Avenue and 23d Street, to Lexington Avenue and 34th Street; that he carried it on his head supported with his hands; that he was nearly exhausted when he let down his load, and immediately had the first attack of that pain. I again examined his chest carefully; there was no murmur with either sound of the heart, and the rythm was perfect; respiration was natural, and the sounds of the lungs were healthy. He was ordered to keep still, to take no medicine, and to eat lightly. He sat up reading and feeling perfectly well; at dinner he ate heartily. Just after dinner, while he was still reading, his wife left the room for a few moments, when she heard him call. She found him doubled up with pain on the floor. I saw him about 3 o'clock, when he was suffering violent pain, which he located at the lower part of the sternum. The pulse was feeble, intermittent every third beat, respiration difficult, the heart's action convulsive, bounding, leaping. He had no sensation below the elbows, hands and feet cold, lips blue, nostrils dilated. He was ordered brandy and the hands and feet to be rubbed with dry mustard. I saw him again in about one hour and a half, his condition not much altered, except that he had vomited part of his dinner, and the pulse intermitted every other beat. Stimulants continued. At nine o'clock I saw him again. Reaction was partially established, still the heart labored at times; he was constantly coughing, and had expectorated nearly a pint of mucus, tinged with blood, and there was crepitant rale over the right side of the chest. In the morning, (Thursday,) the cough and expectoration had ceased, but the dyspnœa was increased, with great restlessness. All efforts to relieve him were unavailing, and he died at half-past ten in the evening. Examination of the body was made on Saturday morning, at nine o'clock, in the presence of

Dr. A. C. Booraem. The superficial veins of the thorax were distended with blood. The lungs very much congested, but there were no appearances of former disease, no pleuritic adhesions. The pericardium was loose about the heart, and on being opened a small quantity of serum, tinged with blood, was found, and a small wound in the heart about a line in length and an inch from the apex, from which fluid blood was oozing. This opening was found to communicate with the inferior part of the right ventricle. No further examination was made.

DR. FINNELL inquired how long after he died was the post-mortem made?

DR. LEAMING replied, that he died on Thursday, and it was made on the Saturday following.

DR. FINNELL observed, that it frequently happens in dividing the second intercostal cartilage the knife slips down and wounds the heart, and it is not discovered until the heart is actually taken out. He had always noticed, when post-mortems were made more than 24 hours after death, there was always bloody serum in the pericardium.

DR. CONANT thought if rupture did take place, it would be across the fibres, and death would occur almost instantly.

DR. POST in this connection referred to a case that occurred in the New York Hospital some years ago. It was a rupture of the heart and injury of a number of other vessels, caused by being jammed between two vessels. The rupture was large enough to admit four fingers, and yet the patient lived 7 hours. He was in a state of prostration all the while, however.

DR. MARKOE was slow to admit that rupture of the heart was the cause of death. He thought that the length of time the patient lived would conflict with the idea, also, that the opening was too small for a laceration. There are only two causes of rupture: 1. Where the heart is so diseased that mere ordinary exertion is sufficient to rupture it. 2. When the heart has its natural strength of tissue, and is ruptured through by some very great exertion or violence, as in the case cited by Dr. Post. In both these cases the rupture is of considerable extent. He thought that, in this case, he would have a great deal of hesitation in presenting it as a case of rupture, for its edges were smooth, and the wound of such a small extent that it had every appearance of being made by the knife.

Endo-metritis—Phlebitis.—DR. CLARK exhibited several specimens. The first was a case of Endo-metritis—Erysipelas—Inflammatory Phlebitis of Femoral and Saphenic Veins. The history of this speci-

men is as follows: A woman was delivered on the 30th of March without any accident in her labor. On the 31st erysipelas of the left leg appeared, which, however, subsided very readily. On the 4th of April she began to exhibit symptoms of endo-metritis; she had a chill; the lochia was suppressed, and there was a certain degree of tenderness over the uterus, perhaps at the two sides. On the second day after the occurrence of the symptoms, there were indications of phlebitis, inflammation of the femoral and saphena vein; tenderness; a certain degree of redness over the vein, near to Pouparts ligament, and so down for a certain distance. The leg began to swell; erysipelas had then subsided, but in a day or two an erysipelatous blush appeared; at the same time there was a surface of a pale yellow color with tumefaction, and a slight tendency to vesication running up the inside of the leg in the course of the lymphatics, toward the ring. The severity of the phlebitis did not seem to be very considerable during life, although after death it appeared that it was about as intense as it could well be. After the swelling made its appearance she had a chill; if not that, at least a sweat every day afterward until her death. Just previous to her death she contracted large bed sores, which were disposed to slough pretty deeply. Under the influence of these, with her original disorder, she died the day before yesterday. The examination that was made disclosed all that had been made out during life, and I believe very little more.

Autopsy.—The uterus for the 16th day after delivery was rather unusually contracted, considering that there was inflammation of its inner surface. The exudation as the result of inflammatory action still remains upon it in moderate quantity. The neck is ecchymotic, as is often the case after labor. At the upper end of the uterus is the remains of the placenta. Deep in the placental attachments is found pus. The sinuses of the uterus were not discovered to be in a state of inflammation, but the right broad ligament was involved in inflammatory action. It was believed, though not demonstrated, that the ovarian vein of that side was filled with pus. At any rate, pus was found in some tube, but it was a little uncertain whether it was a vein or an enlarged lymphatic. There was a certain amount of inflammatory action upon the posterior surface of the uterus, and a little about the peritoneum, with which this broad ligament was in contact; otherwise there was no peritonitis. The femoral vein is here filled with a plug, which appeared at the time of the examination a simple coagulation of blood. It is undoubtedly partly blood and partly fibrinous exudation. The saphena vein was slit open down to this point,

and the remark that was made on opening it was, in substance, that this was a substantial apology to those who call this disease milk leg, for the contents of the leg did look really like thick milk. In other words, it was pus in the ordinary state of diffluency. The plug in the vein is complete, so that the pus from this region did not pass into the circulation. The plug is in the femoral vein, and also in this branch of the saphena at its inside. The chief interest in this case is the connection and concurrence of endo-metritis with inflammation of the veins of the thigh, and yet the absence of any traceable connection between the inflammation in the thigh and the inflammation in the uterus. It was one leading object of the dissection to discover whether this inflammatory action was continuous up the external iliac into the vena cava ascendens, so as to meet any of the veins that take the blood from the uterus, either ovarian or uterine. A pretty diligent search was made, but no such connection found; yet the two are inflamed together.

I should have remarked, as a further evidence of inflammation in connection with the uterus, that the fallopian tubes were both pretty completely filled with pus. The purulent infection in this case was probably from the uterus, and not from the veins of the leg.

Dr. Markoe.—How clearly marked was the character of the erysipelas?

Dr. Clark.—The first erysipelas occurred before my term of duty commenced. I did not see it. In the second attack there were those appearances usually noticed on the first day of an erysipelatous inflammation, a very distinct blush and tumor of the skin, terminating abruptly, with the exception of a space of yellow color that I described. This subsided in 24 hours, on the application of a cool solution of opium.

Dr. Gardner asked if the first erysipelas entirely disappeared before this metritis came on.

Dr. Clark—My impression is that it had subsided, and that which occurred afterwards was altogether a new production. In answer to a question from Dr. Jenkins, as to whether delirium was a very common, and almost pathognomonic symptom of purulent affection, he stated that it was by no means the case; the decided majority have none whatever.

Dr. White stated that he did not see why there was not some connection between the pus in the veins of the leg and that formed in the uterus.

Dr. Clark said that is just what we all did not understand. We searched for this connection and found none. But the concurrence of

these two diseases suggests the inquiry for future observations, whether or not there is any connection in the diathesis.

Dr. Markoe asked if it was not a common fact that the manifestations of suppurative phlebitis occur in different parts of the system, when no visible connection can be traced between them.

Dr. Clark—My opinion about that has been, that though different and distant portions of the body are often found at a post mortem the seats of inflammatory action, there was notwithstanding a single point of primary inflammation, and the numerous other points were secondary to the first.

Dr. Markoe—This case would fall under that category. The primary affection in the thigh, and the secondary in the uterus, or vice versa.

Dr. G. T. Elliot being referred to, stated that at the time he saw her it was impossible to tell whether there was erysipelas present, or whether it was an attack of erythema. It was stated to him as a case of erysipelas.

Bony Cyst of Kidney.—Dr. Clark then presented a specimen of a bony cyst in the body of the kidney. A cyst which will hold a tea spoonful or more, entirely enveloped in a calcareous cyst, with a good deal of calcareous matter surrounding it. In one part it is half an inch in thickness, in another part not more than one-twelfth of an inch. The kidney in other respects appears to be perfectly healthy. In cutting through it, it was necessary to use the saw. He supposes it is a serous cyst of the organ that has degenerated in this way, and become incrusted with calcareous matter. There is no history of the symptoms connected with it, so far as it was known. The patient was brought into the hospital with double pneumonia, and died soon after admission. The other kidney was healthy.

Extensive Cancerous Disease.—Dr. Clark next exhibited an instance of cancer of the pleura, of the lungs, of the small intestines, &c. He observed, in regard to this specimen, that he regretted that the usage of the Society, and the regulations of Bellevue Hospital, do not permit the bringing of a whole body as a specimen. This afternoon he had inspected a pathological museum. He has never seen so much disease in any one person before. The leading disease was cancer. It did not appear that she had had any external cancer that had been removed, the breasts were entire, and there was no cicatrix on the body anywhere that would indicate any serious surgical operation, yet the lungs were almost a mass of cancerous disease. The amount of cancerous disease of the lung probably exceeds anything ever exhibited here before; at any rate, it is greater than any that I have ever

seen. With this cancerous disease of the lung there is also cancerous disease of the pleura; *cancerous disease of the small intestines, and none in the large;* cancerous disease of mesenteric glands; scrofulous tumors of arm and groin; fibrous tumor of the uterus, with a little polypus in the interior, making together a very considerable variety of disease; and yet, for all that, the woman had a right to live, and was not killed by any one of them, but died of apoplexy of the brain and kidney—that is to say, effusion of blood into its substance. We could not make anything of her history, she being insensible when admitted. She lived three or four days. The day before her death she seemed to have some difficulty in breathing.

Regular Meeting, April 28, 1858.

Dr. T. C. FINNELL exhibited several specimens.

Spinal Cord.—First specimen: Spinal cord, taken from a woman who entered St. Vincent's Hospital, four months ago, suffering from the results of an injury to the sacrum and coccyx, from falling down a long flight of stairs. The fall was followed by a good deal of pain and distress in the part; this soon after was followed by severe inflammation, and sloughing over the projecting portions of the sacrum. In this condition, with a large ulcerated surface, she entered the hospital. On admission she was exceedingly weak, being prostrated from the immense discharge that was taking place. She was placed upon her abdomen with a view to heal up the surface, but it would not do. From time to time portions of necrosed bones were removed by the bone nippers. While upon the abdomen the wound would heal up partially, and then sores would appear on those prominent portions of the body resting upon the bed, over the patella, the prominent portions of tibia, and on the instep. She continued in this way for more than four months, suffering from extreme pain, and a discharge from eight or ten ulcerated surfaces.

Autopsy.—The lower portions of the sacrum and coccyx. The surrounding soft parts were in a state of mortification; the bones were dead and necrosed. The portion of the spinal cord in the sacrum was so softened that it could not be removed. The cord above the points of softening was intensely injected. There was no paralysis at any time during the whole history. The inflammatory action extended itself from the sacrum and coccyx, to involve the uterus and rectum, agglutinating the whole pelvic viscera together.

Larynx of a Suicide.—The second specimen was the larynx of a suicide, who cut his throat with a razor. Several different incisions were made across the thyroid and cricoid cartilages; they were mostly

upon the right side, and by two of these incisions the suicide had cut out the crico-thyroidean membrane completely. It shows an anomaly also in the fact that the right superior cornu is absent. It is not known how long he lived after the infliction of the injury.

Dr. Dalton.—I would ask Dr. Finnell what was the cause of death?

Dr. Finnell.—Hæmorrhage.

Dr. Dalton.—From carotid?

Dr. Finnell.—I suppose from the smaller vessels; the carotid was not injured.

Dr. Dalton.—In that portion where the crico-thyroidean membrane is cut away, were the integuments over that spot absent, or did they simply retract?

Dr. Finnell.—At the time of the examination I satisfied myself that the integuments were gone, though I did not try to approximate the edges.

Dr. Dalton.—It is a very singular wound; the membrane must have been taken away by two distinct cuts. Here are four different cuts that are made, and I would ask if such a circumstance is not a very rare one in any but an insane person? Was this patient insane?

Dr. Finnell.—It is very rare for suicides to make more than one free cut, when they divide everything. This patient was not insane.

Dr. Harris asked if such repeated attempts might not be owing to mania-a-potu, as well as insanity.

Dr. Finnell.—In all the cases of suicide in delirium tremens I have examined, I have always noticed but one incision.

Dr. Finnell stated in relation to this case of suicide, that the right cavity of the heart was empty; he had often noticed this to be the case in sudden hæmorrhage.

Dr. Dalton asked if he had ever measured the quantity of blood lost on these occasions.

Dr. Finnell.—I have often tried, but seldom, if ever, succeeded. In some the amount lost is very small, in others very large. In the case of the negro woman shot in 26th Street, the quantity lost was estimated at two quarts. In the case presented this evening, the quantity was possibly over a quart. In some cases the quantity in suicidal cases is not more than eight or ten ounces, yet they die from its loss.

Dr. Harris.—The question might be asked, how great a quantity of blood must necessarily be lost to destroy life?

Dr. Finnell.—This question has been put to me in court, in every possible form. I have stated that the amount varies very much. In

one case that occurred in Second Street, about a year ago, a woman cut her throat, lost about two quarts of blood, after which she went to the window and threw herself out on the pavement below, thereby producing fracture of the skull and other injuries. It would seem that she had lost blood enough to destroy two or three other persons. It had been assumed, from the circumstances of the case, that she had been murdered by her husband; and though there could be no one who could be brought to swear positively against him, it was a very difficult thing to get the jury to agree as to its being a suicidal case.

Gunshot Wound.—The last specimen is one showing the effects of a gunshot wound. It consists of the femoral artery and vein of the left side, with a portion of the pelvis and bladder and penis taken from the body of a negro man, who was shot at the Brandreth House a few days ago. The ball entered a little below Pouparts ligament on the left side, passing obliquely downwards and inwards through the artery at this point, and out at this point, leaving only a small thread between the two openings. These openings are seen, the vessel being stuffed with cotton; the ball then struck the ramus of the pubis, and drove some of the fragments into the bladder below. He probably lived five minutes after the reception of the injury. The bullet was found in the urethra in this position. There was also found a piece of button, which went before the bullet through the artery and vein, and through the bone, when it lodged in this position.

Œdema Glottidis.—Dr. Conant showed a specimen of œdema glottidis for Dr. C. W. Packard.

David D——, a native of Scotland, aged 40 years, laborer, of temperate habits, was sent to Blackwell's Island April 23d, 1858, suffering under erysipelas, involving the scalp and upper part of the face.

Three days before admission patient noticed a redness and puffiness of the eyelids, which so interfered with sight that he became unable to work. At the time of admission there seemed to be nothing unusual in his case, save a great degree of œdema in the parts affected.

April 24th, 4 o'clock, P. M. Patient has taken some nourishment, and appears to be very comfortable. The erysipelas has extended to the clavicles; head and neck very much swollen, and of a dusky red color; head thrown back; respiration easy; no cough, or marked dyspnœa.

9 P. M. Patient visited again; says that he feels better. Got up without assistance, to urinate. On returning to bed again was suddenly attacked with urgent dyspnœa, and died in fifteen minutes.

Autopsy 14 hours after death. Rigor mortis passed away. Scalp

face and neck greatly swollen and discolored. On removing the larynx a white glossy bag was discovered extending from the anterior surface of the epiglottis to the posterior corner of the thyroid cartilage, the portion along the right edge of the glottis being pendulous, and falling down towards the rima glottidis; the contained fluid was gelatinous, and of a bluish tinge, resembling the effusion which sometimes follows the application of a blister to the epidermis.

Mucous membrane of the larynx and upper part of the trachea of a deep uniform red color, shading off into pink as the bronchia were approached.

Lungs somewhat congested. Cerebral veins full of blood. Heart and other organs healthy.

Regular meeting, May 12, 1858. E. Harris, M.D., Vice-President, in the chair.

Dr. Agnew presented a specimen of *fracture of the ribs, rupture of spleen, &c.*, for Dr. George F. Shrady.

R. P——, æt. 42, a native of Scotland, was admitted into the New York Hospital, April 30, 1858, in the service of Dr. S. M. Halsted. The patient a short time previous had fallen into a ship's hold a distance of fifty feet or more, striking upon his left side. On admission he was considerably prostrated, skin cool and pulse frequent. The ordinary stimulants were administered, and reaction was soon fully established.

On examination into the extent of the injuries received, there was found to be fracture of the 6th, 7th, 8th and 9th ribs of the left side, with a considerable degree of emphysema, showing the lung to be wounded.

The ulna was found to be fractured about three or four inches from the elbow; there was also a dislocation of the radius, the cup-shaped head of which was plainly felt through the skin over the external condyle. There was no opening into the soft parts. The arm was placed in a rectangular splint, and a body bandage applied.

The patient went on very well for a day or two, the emphysema having nearly all disappeared; when it was ascertained that there was a considerable amount of effusion in the left pleural cavity. Dry cups and blisters were applied, but with little good resulting; he seemed to grow weaker, breathing became more difficult than it had been, pulse became more frequent until the 5th day after the reception of the injury, when he died.

Autopsy ten hours after death. The cavity of left pleura was half filled with bloody serum. The 6th, 7th, 8th and 9th ribs were found

to be fractured near their angles. The lower lobe of lung of that side had a lacerated wound into its substance about an inch in diameter, half inch in depth, corresponding to the fracture of the 7th rib, a fragment of which was driven into the organ. The right pleural cavity contained a small quantity of bloody serum.

The cavity of the abdomen contained a large quantity of clotted blood, which came from a rupture of the spleen, at its hilum. The liver was uninjured. There were no evidences of any peritonitis.

On examining the seat of injury in the arm, the ulna was found to be fractured about four inches from the extremity of the olecranon, and somewhat comminuted. The head of the radius had pushed itself through the upper portion of the fibres of the supinator radii brevis muscle. It seems that he struck upon the elbow causing the fracture, and the force still continuing to act dislocated the radius as before described.

Gangrene of Lungs—Serous Cysts of Kidneys—and Cyst of Liver.—Dr. Clark exhibited two kidneys and a section of the liver of a woman, who was received into the Bellevue Hospital about ten days before her death, which took place about five or six days since. When admitted she showed the marks of having been treated for some disease of the throat, of an inflammatory character, inasmuch as the whole anterior surface of the neck was the seat of a blister partly healed. She was without voice, respiration was somewhat difficult and slightly stridulous, so that there was no hesitation in assuming, without knowing anything of her previous history, that the trouble was laryngeal. He is unable to give the previous history. The prominent points of the case, while in the hospital, were as follows: She gradually recovered from her laryngitis so that her respiration became easy, and her voice returned. But as she recovered of the laryngitis, there continued an exceedingly offensive odor, which he had forgotten to mention was noticed at the time of her admission. It had at that time the character of a mercurial breath, and he had no doubt that it arose from that cause, as there were marks of ptyalism in her mouth. This odor gradually merged into one more offensive, having slightly the character of gangrene; yet it was so mixed up with the odor previously noticed, that he was deceived in regard to its being positively gangrene of the lung, as it turned out to be in the end. The expectoration was not of that peculiar green color so commonly observed in gangrene of the lung, but was more of a grayish color, looking a great deal like the expectoration of pneumonia in the transition from the red into the purulent stage. In this condition she con-

tinued to grow worse and worse, and was losing strength rapidly. Two or three days previous to her death he became satisfied that she had gangrene of the lung, though he could not locate its situation definitely; probably the cavity was at that time filled. She died soon after from the effects of this gangrene.

Autopsy—Post-mortem examination.—The gangrenous part occupied its usual position a little below the central portion of the lung behind. The interesting part of the case is that illustrated by the specimens upon the table.

It is a kidney that has become almost completely degenerated by serous cysts. There is scarcely a portion of the secreting portion of the kidney to be seen. It is the left, and weighs 2 pounds and 14 ounces. The right kidney is somewhat smaller, weighing about 2 pounds and 2 ounces. In this latter a portion of the secreting structure can still be seen. When the specimen was recent the vascularity was perfectly natural. There were no symptoms that would lead to the suspicion of any kidney disease, at least during her stay at the hospital. What her previous history was he is unable to say. There is also a very unusual cyst of the liver, situated mainly in the inferior portion of the right lobe. That it is not enlargement of the ducts is rendered probable from the fact that smaller cysts, the nature of which is unknown, were found in large numbers on the free border of the organ, presenting the appearance of a cirrhotic liver. In the inferior portion of the tumor there are evidences of adhesion to some of the surrounding tissues; whether this was caused by pressure, or the irritation of the presence of the tumor, did not appear at the post-mortem examination. The first view we should naturally take of this cyst is that it is an hydatid. If it be an hydatid tumor, the question would arise, why there are so many smaller tumors in the neighboring portions of the liver. Hydatids never appear in that manner. Then on feeling the tumor there is no rubbing sensation experienced by the finger. Hydatid tumors of that size are pretty sure to have something in them, a number of smaller cysts. It was a possible thing to recognize hydatids of the liver during life by the peculiar rubbing sensation that it communicated to the touch. Dr. Clark cited a case he had seen under the care of Andral, when the diagnosis was thus made out: There was nothing of that feel in this tumor after it was removed, and it was not known to have existed during life.

In regard to the serous cysts of the kidney, Dr. Clark had heretofore expressed a decided opinion, the result of his own microscopic study, viz., that they are a new production altogether. They are not

owing to obstruction of the uriniferous tubes by inflammatory or any other diseased action; they are not owing to expansion of the malphigian bodies, but to a new cell growth deposited between the cup-shaped tubular portion and the malphigian bodies. If they were owing to obstruction of the uriniferous tubes, &c., there would be a marked derangement of health attending their development. It is a new cell growth which appears in that part of the body by preference, deposited in the stroma of the kidney, between and outside the uriniferous tubes. We have perhaps similar deposits in the mammary gland, in the broad ligaments, and in the cellular tissue about the ovaries.

As regards the cyst of the liver, it would be well to open and look into it. On laying it open the contents seem to be a slightly viscid and perfectly transparent fluid. It is highly probable that these small transparent eminences that were observable upon the neighboring portions of the liver were of the same character, and that we have really a cystic degeneration of the liver itself—a form of disease which Dr. Clark has never seen, so far as he knows—a condition which has not attracted much attention. The case, then, is substantially one in which laryngeal inflammation occurred, went to the point of producing serious disturbance of the respiratory function; following this, gangrene of the lung, which destroyed life; the post-mortem examination developing two forms of disease that were not suspected during life—extreme cystic degeneration of one kindey, very considerable of the other, and a cystic disease, such as has been described, of the liver.

These specimens indicate, along with three or four other specimens that have been presented to the Society, extreme degeneration of the kidney, and the very slight influence that form of disease has upon the general health. In general it has not been recognized during life, the patient dying of some other disease.

It will be found that, when kidneys that have undergone this degeneration are examined carefully, the kidney remains, but is broken up into laminæ, and these form really the divisions, the septa between the multiple cysts, so that the kidney goes on to perform its functions, not as a conglomerate organ, but in layers in which it is divided, and it is for that reason that its function is not disturbed until the last few days of life.

Dr. McCready called to mind a case that occurred in Bellevue in his wards, a number of years ago, in which a cyst was developed in the upper part of the liver, pushing up the diaphragm, and which contained a couple of quarts of slightly turbid fluid.

Dr. Clark observed, is there not reason to suppose that it was hy-

datid degeneration? He has a specimen similar to that in his museum, which contains two quarts of fluid, but on examining the sedimentary matter he discovered the hooks of the echinococcus, showing the animals to be all destroyed.

SELECTIONS.

A Case of Fracture of the Lower Jaw at its Neck. By M. O Heydock, M.D., Chicago, Illinois.

I was called upon on the evening of the 21st of May to see Mrs. B. F. H., who had, I was told, just been thrown from her carriage, and severely injured. Upon my arrival, I found that a fracture of the lower jaw constituted the only injury of a serious nature, the treatment of which is the subject of this paper.

The fracture was evidently at the base of the left condyle; crepitus was very marked and distinct, and deformity arose from a swaying of the jaw to the left, owing, as I suppose, to contraction of the pterygoid muscle. The fracture was easily reduced, the ordinary roller bandage applied, and cold water dressings ordered for the night.

Upon calling the next morning, I found that soon after falling asleep displacement had taken place, and it was in the same condition as at first.

I now applied a pasteboard mould and the roller as securely as possible. The next morning I found that this had served the purpose during the day, yet during sleep displacement had again occurred, as in the previous night.

I now, with the approval of Dr. Freer, who had seen the case with me, had a spring made, partially encircling the neck, having a pad at each extremity, making pressure upon the left ramus and over the right articulation, hoping to counteract and overcome the action of the pterygoid muscle.

This acted indifferently well and was thrown aside. I now used one after another, starch, binders' board and straps, and during the ensuing ten days, almost every bandage I could find, approved by authors or suggested by friends. But each and every one failed me in my effort to retain the jaw in its place during the night, when voluntary control was lost in slumber. Two weeks had elapsed, displacement had occurred each and every night, crepitus was still as marked as ever, and pain on motion as great.

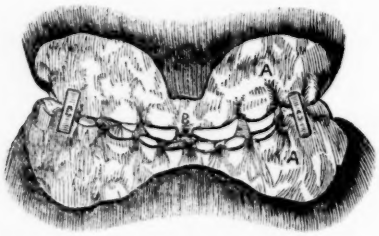
The prospect was anything but encouraging, a false joint seemed not only a possibility but a probability, unless by some contrivance immobility could soon be obtained.

I had exhausted my inventive resources in external appliances, and

I now made a careful examination of the teeth, to see if from them I could not obtain some hint which would assist me to accomplish the object I had in view. I observed that the upper central incisors were widely separated, and it occurred to me that advantage might in some way be taken of this peculiarity. A few hours elaborated the idea which had presented itself, and which was, with the modifications to be hereafter mentioned, successfully carried out and executed.

The idea suggested was, that a mould of the teeth of the lower jaw should be taken, running as far back as the molars, and from this a gold cap should be made which should snugly fit, and be securely and firmly attached to the teeth by clasps or otherwise. To this cap, at the point of separation between the central incisors spoken of above, a fragment of gold was to be attached, which should, when the jaws were closed, pass up between these incisors somewhat in the manner of a wedge. If I am understood, it will be seen that, if the cap retains its place, I have by the wedge-like process overcome the tendency to lateral displacement.

I now called upon Dr. Allport, a dentist of our city, and stated my project to him. He suggested that the pressure of the wedge, even though slight, and though not exerted during the day, while the jaw was under the control of the patient, might give rise to some soreness and irritation if continued as long as the nature of the case demanded. He proposed to overcome this objection, by fitting a cap for the upper jaw, similar to that of the lower, into which the wedge should be inserted, thus distributing the pressure. The two caps were then to be secured together by a couple of slender bars crossing from one cap to the other.



A A represent the two caps; C C the cross-bars connecting them; and B the wedge passing up between the incisors and hidden within the cap.

Impressions were now taken in wax, and the caps made after the same manner as the plates made by dentists for artificial teeth.

Upon placing the caps in position, it was found, as we had anticipated, that the gold operating on a foreign body would not admit of a closure of the jaws. To obviate this, the opposing and impinging surfaces were freely cut away, exposing the crowns of all the teeth, thus permitting a close approximation of the jaws, and at the same time furnishing an outlet for the secretions which would naturally ac-

cumulate within the caps, and prove a source of annoyance and irritation.

The relation one cap would bear to the other was ascertained by placing them in position, and directing the patient to bite into a mass of softened wax, and while the caps were imbedded in the wax they were removed and secured in this relation by bars crossing in the neighborhood of the canine teeth of each side.

Dr. Allport now suggested that a thin layer of gutta percha should be placed inside the caps, which might, by its presence as a lining, prove less irritating than the plates alone, while at the same time it would more perfectly adapt itself to the inequalities of the surfaces than the metal. This, after being softened in boiling water, was laid within the caps, and they placed in *situ* while it was soft and pliable and as hot as could well be borne. The patient was then directed to shut the jaw naturally, and it was then firmly pressed home and immovably fixed.

I applied the roller bandage at night for a week or so, to guard against any possibility of displacement from fright or other cause, though there seemed to be little occasion for it, for voluntary motion even was lost to the patient. The natural projection of the upper teeth over the lower, combined with the slight separation of the jaws caused by the caps, gave ample opportunity for the ingress of soups and other fluids by which the patient was nourished and supported, until the removal of the caps.

During the first two weeks considerable pain was experienced in the neighborhood of the fracture, and at the expiration of that time the provisional callus was perceptible through the tissues.

Four weeks having elapsed from the day in which the caps were applied, and six from the date of fracture, they were removed, and union found to be complete. For the first few days the articulating surfaces of the teeth did not readily come together, but at the end of a fortnight the recovery was perfect and satisfactory in every particular.

There was, upon removing the caps, some soreness of the mucous membrane, but this rapidly subsided under the use of an astringent gargle combined with chlorate of potash.

As a general rule fractures of the jaw are easily treated, the roller, pasteboard and starch proving sufficient. But in this case they were of no service in restraining lateral motion, and until this experience I confess I was not aware how difficult a thing it was to control that movement. I certainly gave them a fair trial, for Fergusson tells us, in his work on surgery, that he "does not take particular pains about the bandages after the fifteenth day," while in this, two weeks elapsed without any perceptible change for the better; nor was there any promise that there would be if the same course was continued for a longer period.

In closing, I would say, that it is not of course to be expected that in all fractures of this nature the incisors will be found conveniently separated and admitting of an application of just such a contrivance as this. But this report will have accomplished its errand, if from it any one shall have obtained a hint, assisting him to control the lateral

movement of the jaw—a thing which, like many things else untried, seems to the uninitiated, simplicity itself, while in fact it gives rise to an anxiety and vexation of spirit "not dreamed of in their philosophy."

Since writing the above report, I have seen a case where there was a fracture of this bone at the symphysis. The gentleman in whose practice it occurred, finding it difficult to retain the fragments in their proper relation with each other by the roller and pasteboard, sent the patient to Dr. Allport, the gentleman who had prepared the plates for me in the previous case. The tissues were lacerated at the point of fracture, and one of the fragments fell below the other and projected slightly beyond it. The course to be pursued was to bring the jaws together, and there retain them as motionless as possible; but it is a difficult thing to apply a bandage here, which shall for any length of time maintain the integrity of its pressure and support, and in these cases relaxation prevents our obtaining the end we have in view, in its application.

Silver caps, lined with gutta percha, were applied in this case, as in the one reported. By them all motion of the bone backwards, forwards and laterally was controlled, and in a great degree its downward motion also.

Being a near neighbor of Dr. Allport, I was asked, in the absence of Dr. Freer, to apply some bandage to support the jaw, after the caps were placed in position. I proposed the following: A skull cap made of brown linen, or some material a little more substantial perhaps, which should fit as snugly as a wig. To this lappets should be attached in front of the ears with buckles, a padded pocket for the chin should also be made of the same material, and to this should be fastened straps, which being drawn through the buckles, give a leverage upon the jaw that we can increase or diminish at pleasure. One strap was fastened to the cap, over the region of the anterior fontanel, so as to get direct upward pressure; while the one attached to the cap, with the crown as the starting point or fulcrum, has a tendency to draw the bone backward.

I believe the skull cap and straps here introduced will be found to be the best and simplest external appliance, for all fractures of the jaw. It does not slip like the roller, the pressure is distributed, and it can be loosened or tightened in a moment, with little or no trouble.

It may not be a new idea, yet I do not remember ever having seen it mentioned. At any rate, a thing so simple and effective cannot be too generally known.—*Chicago Med. Journ.*

Treatment of Neuralgic Pains by Narcotic Injections. By Dr. Alex. Wood.

All those who have paid much attention to the pathology of neuralgia, must be aware that very great additions have been made to our knowledge of the pathology of this disease, and important improve-

ments have been suggested in the valuable work of M. Valleix, published in 1841. That gentleman pointed out the fact, which seemed to have escaped the notice of all previous observers, that the superficial nerves are the ones most commonly affected; and not only so, but that there are certain points in the course of each nerve which are more liable to be affected by pain than the rest of the nerve; and that these points are precisely those where the nerves approach the surface of the body. M. Valleix has noticed four points in the course of every nerve that are liable to be affected by neuralgia, and where the neuralgic pain is more apt to occur than in the other points. The first of these is the point where the nerve emerges from the bony canal through which it passes; the second, the point where the nerve traverses the muscles to ramify in the integuments; the third, the points where the terminal branches of a nerve expand in the integuments; and the fourth, where nervous trunks become superficial during their course. This writer has gone most carefully over the entire nerves of the body; and has shown the various points not only generally in reference to the whole nervous system, but has also, in detail, indicated each particular spot where we may expect the pain to be seated, according to the particular nerve affected. That is the first matter I would like to impress on those who take an interest in the subject. It is of importance to note, that the value of this information is that it enables us to find the place, often very limited in extent where the tenderness on pressure indicates the propriety of local applications; and also, that from the nerve being superficial, there it is, of course, more within the reach of remedies applied externally.

"There is another great fact which M. Valleix has shown; and that is, that while the pain in neuralgia is most generally intermittent, the unfortunate patients attacked by it are subject to have paroxysmal attacks; and, while there is thus a difficulty in applying your remedy during the attack, you can at any moment, even during the intervals of the pain, awaken it by pressing firmly on those points in the nerve I have indicated. Let me give an example. A patient complains, let us say, of a pain in his brow. The pain, he says, is often severe: it comes on, perhaps, after he goes to bed at night; but at this moment he does not feel any pain, and therefore he fears that you can be of no use to him. Well, seat him in a chair, place his head back, and take a coin—a shilling will do very well—and press with the edge of it along the ridge of the forehead, and immediately it comes to the point where the nerve emerges the patient will scream out. I have seen and tested this so often that I can confidently state that it is a case likely to occur often in practice. Or, perhaps, to take another instance: a patient is laboring under sciatica. In that case press firmly near the posterior edge of the trochanter major, or near the superior spinous process of the ilium, or at the upper part of the ischiatic notch, and, in all probability, not only will the point so pressed on exhibit tenderness, but a distinct pain proceeding down the limb will be produced.

"A very interesting class of cases is that of young women who suf-

fer from pains about the mammary region and the intercostal spaces. These are very often mistaken for *pleuritis*, and are treated with leeches when there is no necessity for them. If you take a patient suffering from such pains, (which are very often accompanied with menstrual irregularities,) and press on the outside of the spinous processes of the vertebræ, or along the lower margin of the rib, you will very quickly awaken the pain, which is quite a sufficient test of the fact that it is neuralgic pain, and not pain produced by inflammatory action; and that fact being so ascertained by the use of the little instrument I have to speak of, the pain is at once abated, and in many cases entirely cured.

"Another seat of pains which may be treated with this instrument, is the abdominal parietes. There are two parts where I have found the pain to occur very frequently: one is over the region of the liver; and I am satisfied that the existence of neuralgia in that situation explains many of those cases of supposed liver-disease, in which we cannot detect any enlargement or any apparent organic disease of that viscus. The needle introduced under the abdominal parietes, (of course taking great care not to wound the peritoneum,) and a narcotic injection thrown in through it, will almost instantly relieve the pain. Another class of cases are pains about the groin. We very frequently find the pains in that situation; and females suffering from them have very often been treated, by mistake, for uterine disease when there was nothing of the kind. In several cases which have come under my own observation, the speculum has been forcibly introduced into the virgin vagina when the patient was suffering from nothing but neuralgia of the abdominal parietes; caustic has been employed, and the most severe treatment adopted, when the little instrument I will soon describe to you would have almost immediately relieved the pain.

"But the variety of neuralgia in which of all others I can predicate an immediate and marked success, is the trifacial neuralgia, and especially that species of it where the tender point is found at the supra-orbital foramen. The extent of surface affected here is often very limited; indeed, I have sometimes only succeeded in detecting it by pressing the point of a patent pencil-case into the foramen. When once it is discovered, however, the injection may be freely thrown into the foramen; and although in this situation the pain of the application is severe, yet the result is usually a speedy and most successful cure. Sometimes you will find the painful spot at the upper part of the side of the nose, where the infra-trochlear nerve emerges from the orbit. Here also the needle may be freely used. By the use of the injection in one or other or both of these places, the severe pain in the eyeball, so often complained of, is at once cured.

"I have already stated in the first paper I published on this subject ('Edinburgh Medical and Surgical Quarterly Journal,' April, 1855, p. 265,') how I was led to use this remedy. I had studied the book of M. Valleix with great interest soon after its publication, and found the plan of treatment which he recommends, viz., the application of several blisters over the tender points of the nerves, not nearly so

successful as he led me to expect, or as it might otherwise be thought to be. I then varied the application very much. I raised the blister, removed the cuticle, and applied morphia (both in a liquid form and as powder in ointment) on the surface, and found, contrary to the experience of Valleix, that the patient derived decided benefit from it. One remarkable case, many years ago, I cured by applying nux vomica to the blistered surface; but I never tried it again, for it seemed likely to kill two people: my patient, an old lady, who nearly died of the poison; and myself, then a young doctor, who nearly died of the fright. The application had a most remarkable effect, however, in curing the disease. The old lady lived for many years afterwards, and died of a different complaint altogether. Another method of treating such cases was to scarify the part and rub in morphia; but that was so brutal a method that you will not wonder that it was soon abandoned.

"Then came about a new method of treating aneurism, by introducing the acid solution of perchloride of iron. One day I happened to be using the ingenious instrument constructed by Mr. Ferguson, of Giltspur Street, for the purpose of introducing the preparation into a nævus on the head of a child, when it occurred to me that this was the very instrument I had been so long looking for, and the very thing for introducing narcotic injections in cases of neuralgia. I was not long in having an opportunity of testing its suitability. It was in the end of November, 1843, that I was sent for to see an old lady, upwards of eighty years of age, who had been kept from sleep for four or five days by a most violent attack of cervico-brachial neuralgia. This lady was an old patient of mine, and I knew she could not bear opium administered by the mouth in any form. We are too apt, I think, when we hear of these idyosynerasies, to believe that they are mere imagination. In the case of this old lady, Dr. Davidson had seen her many years before, and treating her inability to take opium as a mere freak of the imagination, gave her twenty drops of laudanum. She had hardly taken the dose when she fell upon the floor in a fainting fit, so that I knew that there was no hope of getting her to take any opiate to procure sleep. I had a solution made of morphia in sherry wine, because I thought it would not irritate and smart so much as alcohol, and because it would not rust the instrument as a water solution of opium would do. I then introduced the needle into the tender part within the angle formed by the clavicle and acromion. In about five minutes the patient's eyes became injected, and looked just like the eyes of a drunken person, and she complained that her head was in a confused state. She soon afterwards fell asleep. The operation was performed about ten o'clock that night; and on calling next morning at eight o'clock, I was somewhat alarmed to find she had never awakened. She was very soon roused, however; but I determined never to use so much as thirty drops of solution of morphia (equal to the amount I had given her) in the case of a person at her time of life, unless I had previously tested its effect upon the system. This treatment quite cured the old lady of the neuralgic pains, which never returned.

"In Edinburgh, I may mention, the use of this instrument has become nearly universal, and the efficacy of the process is well known. I could narrate a vast number of cases in which it has proved eminently successful; but as details would be burdensome, I will only detain you with the mention of one or two.

"A lady, troubled with neuralgic pains, had been punctured upwards of one hundred times, always in different places; but no sooner had the pain been driven from one spot, than it took up its seat in another. At last, I had expelled it from every part of the body, except a corner of the head, and there I was puzzled how to deal with it. The fact was, I could detect no painful point in the scalp. I would impress upon you that the instrument is not to be put into the place where the patient complains of the pain, but into the spot where you find you can awaken the pain upon pressure. Well, I could find no pain by pressing upon any part. The lady's husband, a medical man, took her to the German baths, in the hope that they might furnish what was wanting to the cure. She resided there for several months, but without the slightest benefit; and at length her husband brought her back to me, saying he was satisfied, unless I could cure her, nobody else could. I twice examined the part of her head affected; once more, the second time, I succeeded in finding out the point where the needle should be inserted; introduced the instrument; and from that day she has never had a touch of neuralgia again, though she has suffered from rheumatic gout.

"Another lady, also the wife of a medical man, (and I take these cases, because on that account I am better able to get at the symptoms,) was suffering from very intense neuralgia in the forehead, which had lasted, at irregular intervals, for ten days. The pain was so severe that it rendered her completely useless. I at once inserted the needle; the pain became instantly relieved, and soon left entirely. Since then it has never returned.

"The question may be asked, but how does this process act? I do not think I am bound to answer that question. It would be a sad puzzle to many of us, I suspect, if we were asked how many other remedies which we use, act. We know the effect they produce; but often we are unable to tell why it is so. But I think there are various considerations which may help us to a conclusion on this question. One of these is, that we know that every disease has both a local and a general effect; and we know, also, that the local effect depends very much on the affinity between the particular medicine administered and the tissues to which it is applied.

"I believe the remedy I have been speaking of acts in two ways. First, the injection into the cellular tissue in the neighborhood of the nerve, the needle being charged with narcotic solution, affects the nerve. In the second place, I believe it acts by being passed into a part which rapidly absorbs the medicine, and sends it through the system, thus producing an almost instantaneous effect. In this little instrument we possess the means of bringing the patient almost directly under the influence of opium. It is truly astonishing to see how

rapidly it affects the system. If you throw in a large quantity, you will see the eyes immediately injected, and the patient narcotised; and in a few minutes afterwards you will see him in a profound sleep.

"One objection which may be brought against this process is the gastric disturbance it produces, bringing on a condition very similar to that caused by sea-sickness. Nepenthe, however, does not seem to produce so much sickness as opium, and is therefore preferable as an injection. Another risk connected with this remedy, and which requires to be avoided with great caution, is that, in the case of elderly people, the injection is apt to take a very strong effect. I have more than once been much frightened by the effect it produces on people advanced in life; though, I am thankful to say, I have never been nearer producing fatal results than in the case I mentioned to you. Another caution I would offer is, that you must choose the proper patient for the use of the remedy. A great many persons reading accounts of the process have run away with the idea that it can cure almost every possible pain in the human body. Lately, a lady, about thirty years of age, of an unhealthy constitution, came to me from the south of England to be cured of neuralgia. On examining her, I thought I could detect, from the appearance of her eye, the existence of fungus hæmatodes of the optic nerve, and sent her to an eminent oculist, who confirmed my opinion. Some time ago, an English nobleman came here to consult me about neuralgic pains with which he was affected. He had been much relieved by a person whom I had instructed in the use of the instrument, and came to me to be cured. From examining him, I found there was every reason to believe that there was some internal tumor pressing on the nerve, which created the neuralgia, and prevented its cure; and that tumor we could not remove. The pain he had to endure was of the most agonizing kind; I never saw any one bear pain with such resolution as he did; but I have seen him writhing in agony, have seen him at once relieved with the instrument, and immediately afterwards able to take a long walk. But, of course, so long as the tumor was there, the relief could only be temporary.

"The instrument is of the simplest construction, and is a modification of Mr. Ferguson's already alluded to. It consists of a small glass syringe graduated like a drop measure, and to this is attached a small needle, hollow, and having an aperture near the point like the sting of a wasp. The painful point being ascertained, the syringe, being charged, is pressed firmly in to such a depth as to reach the nerve, when the piston being shoved home, the charge is delivered. No hæmorrhage follows; and, in the many cases in which I have operated, I have never seen any disagreeable local effects, except a slight blush of urticaria round the wound."—*British Med. Journ. Medical Circular.*

Case of Cancerous Tumor treated by Chloride of Zinc. By James Alexander, Surgeon, Wooler.

The following case of cancer does not possess in itself any peculiar interest, and certainly cannot boast of having been successful in its result. But it affords an opportunity of detailing a mode of applying caustic to malignant growths, or indeed to tumors of any kind, when it is deemed advisable to have recourse to its use for their removal, not much known in this country, and which may perhaps be found as effectual as any other, while it is free from various objections on the score of tediousness and uncertainty of operation, as well as prolonged suffering, to which the ordinary methods of applying escharotic remedies are justly liable.

Three months ago a man presented himself to me for advice, with a large carcinomatous growth, occupying nearly the whole of the chin, and considerable part of the under lip. The tumor was beginning to fungate on some points where the skin had given way, and was covered with diseased integuments closely adherent to the mass below on the remainder of its surface, and was still moveable, but not freely, on the parts over which it lay. The patient informed me that a small ulcer had been cut out of the lower lip a few weeks before, but the tumor on the chin, which he represented as being then about the size of a small bird's egg, had been unfortunately left. Deep indurations could be felt along the rami of the lower jaw, immovably united to the bone, and the aspect of the countenance was unhealthy and cachectic. It seemed a most unpromising case to meddle with, and should perhaps have been altogether let alone. But the man was clamorous to be relieved, if possible, from the loathsome encumbrance on the chin, which emitted from the ulcerated parts an abundant and most offensive discharge. His friends were as eager as himself to have recourse to any means that offered the slightest prospect of even temporary alleviation; for of any ultimate benefit, they were most explicitly warned, there was not the faintest hope. It was therefore resolved to make an attempt to destroy the fungating mass by caustic; and I have much pleasure in acknowledging my obligations to Mr. Walker, (my assistant,) for suggesting to me the method of proceeding I am about to describe, which he had very recently seen employed in one of the Parisian hospitals.*

Two parts of fine arrow-root were mixed with one part of chloride of zinc; and while the paste which such a mixture forms was soft, from the addition of a little water it was rolled out into a thin sheet, and then divided into arrow-shaped pieces of about three inches long, each tapering to a fine point at one extremity, and rather less than a quarter of an inch broad at the other end. After drying, the paste becomes hard, and if the points are fine, the arrows are capable of overcoming a considerable resistance. After putting the patient under chloroform, a series of deep punctures were made round the circumference of the tumor with a narrow bistoury, and one of the arrows forcibly inserted into each immediately after it was made, where it was

* Mons. Maisonneuve. Hopital Nôtre Dame de la Pitié, Paris.

allowed to remain. In four days the whole growth was completely detached in one very large, black mass. The surface of the sore for a time looked clean and promising; by and by, however, it assumed an unhealthy appearance, and I cannot say that any permanent good resulted from the operation. The benefit derived in this particular case, however, is not the point to which I would solicit the attention of my professional brethren, but the manner of using the caustic, which I believe, though occosionally practised in France, has been little if at all employed in this country. To do it effectually, one or two precautions should be observed, which were suggested by the progress of this case; and if these are attended to, I am inclined to think they will secure the complete detachment of the part we wish to separate in half the time which was occupied in this case. The arrows should be introduced in considerable numbers, not more than an inch or three-quarters of an inch asunder; the points from the opposite sides should cross one another in the centre of the morbid growth, and they should be inserted as near the basis of the diseased parts as possible, as nearly as can be accomplished in the line of demarcation between the sound and unsound parts. The pain from this procedure, judging from the above case, was not by any means severe; for the man slept tolerably well the first night after the application of the remedy, and spoke and ate, and moved about freely, with little apparent suffering, much less, certainly, than I ever saw when caustic was applied to the surface; and undoubtedly the effect is very expeditiously produced, for the caustic being applied to the root, and not to the surface of the growth, its vitality is at once destroyed, and the separation is completed whenever the integument between the punctures yields to the lateral action of the arrows. I am no advocate for the use of caustic in the treatment of cancer; in common with the vast majority, if not the whole of the profession, I greatly prefer its removal by the knife. But there may be cases in which the feelings of the patient, or perhaps other circumstances, may compel us to have recourse to it; and when such cases do occur, I venture to submit to the consideration of my professional brethren the mode of proceeding I have now detailed.

Not very far from Wooler there lived till lately a person, a shepherd, who was reputed to possess a remedy—a secret one, of course—which destroyed cancerous growths;* and to this man, the people who either were or believed themselves afflicted with the disease, resorted in great numbers, and from immense distances. The basis of the remedy, there can be no doubt, was white arsenic, which was mixed with some acrid vegetables, so as to form a green powder, and this again was made into a paste, and applied to the sore or tumor. All that I have ever seen or heard of this practice goes to confirm the validity of the objections commonly entertained against the use of arsenical caustics, on the score of tediousness, uncertainty, and even risk of life from absorption of the poison; nor have I any idea that the opinion generally entertained by non-professional persons, of the greater perma-

* Since the death of the shepherd, his mantle is supposed to have descended on a brother, who is a gardener.

nence of cures effected by this means than by excision, is anything else than a popular delusion. I am not able to bring forward facts sufficient to enable me to speak with absolute confidence on this subject, however. I have had occasion to operate in six cases of cancer of the lower lip, which had been subjected to the shepherd's treatment, some of them of considerable size; but whether these were cases in which the disease had actually returned, or in which it had never been completely destroyed, I have great difficulty in saying. I never have seen, however, any of those frightful deposits of cancerous matter in other parts or distant organs that disappoint and shock one so much, occasionally, after operation, even in the lip.

Of cancer in the lip I know perfectly the history of thirty-four cases, on which I have operated: of these, six have returned and proved fatal, while twenty-eight have continued permanently cured. Of the cases that recurred, four had begun within eighteen months of the time of their excision; the other two were of longer standing. One of these two was an old and large cancer; the other was not of more than two years' duration, but had been deposited very rapidly through the whole texture of the lip. Of the twenty-eight that have continued permanently well, as far as I could collect from the patients themselves, fifteen or sixteen had lasted upwards of two years; some of them a great deal longer—a few, indeed, had attained a great size; the remainder were of more recent date. I have added these facts to this paper, because the numbers are sufficient to form an item in the statistics of this frightful disease. It is only by the careful collection of large numbers that statistics can be of any value; and I am most anxious, after a long professional life, to place on record any facts, however few and trifling, which, in the hands of other inquirers, possessed of greater opportunities, and of leisure, which I have never enjoyed, may contribute in any degree to the advancement of that art which I have at least loved well and followed laboriously.

Of cancer in the mamma I know of only two cases, during thirty-five years, in which the operation was followed by any permanent benefit. Of these, one an old woman of seventy, survived the excision of the breast nearly three years without any return; the other I operated on five years ago. The woman is in good health at this moment; but there is a tumor about the size of half a walnut in the armpit, which she says appeared about two years after the operation, but has continued quiet and stationary ever since.—*Edinburgh Med. Journal.*

Stomach Disorders connected with Tubercular Disease of the Lung. By Dr. George Budd.

From a Lecture on this subject, in the Medical Times and Gazette for Aug. 7, we quote the following:

"Tubercular disease of the lung, and the inflammation it sets up, by irritation of the filaments of the pulmonary nerves, causes not only

cough, but reflex nervous disorder of the stomach, of which vomiting at the end of a fit of cough is commonly the first symptom. A similar extension of the spasmodic act occurs in whooping cough, where the paroxysm of cough frequently terminates in vomiting. Vomiting is often excited the same way—that is, by a reflected nervous influence—by causes of disturbance in other parts of the body. It is a common effect of inflammation of the brain, and occurs almost constantly during the passage of gall stones through the gall ducts, and during the passage of a urinary calculus from the kidney to the bladder.

"In phthisis, the irritation of the lung on which the vomiting primarily depends is persistent, and consequently the stomach disorder is persistent, or very apt to recur.

"Vomiting occurs more frequently, and other gastric disorder is more common in women than in men, because the nervous systems of women are more susceptible, and reflex nervous disorder of any kind is more readily excited by a given disturbance in them.

"In some cases of phthisis, the mere mechanical act of vomiting is excited; there is mere vomiting of food, or, if the stomach happens to be empty, dry retching.

"In other cases, the secreting apparatus of the stomach is excited by a reflex nervous influence to pour out large quantities of gastric acid, and much sour fluid is ejected from it.

"In the same way, inflammation of the brain, or the passage of a gall stone, not only excites the mechanical act of vomiting, but also, in some cases, a great outpouring of gastric acid.

"By untimely secretion and waste of gastric juice, the power of the stomach is exhausted; and when food is subsequently taken, before this power has been restored, there is an insufficient secretion of the solvent juice, and digestion is slow and imperfect. The food, when it has remained undigested a certain time, irritates the mucous membrane, renders the stomach tender and painful, and causes, by the frequent repetition of the same process, the inflammatory appearances which the lining membrane after death sometimes presents.

"In most lingering diseases the secretion of gastric juice ceases before death, and no post-mortem digestion of the coats of the stomach takes place; but in phthisis it often happens that, through untimely secretions of gastric acid, or in consequence of fermentative processes within it, the stomach at the time of death contains a digesting acid, and its coats after death become dissolved from within outwards to a degree which depends on the energy of this digestive fluid, and the temperature at which the body has been kept.

"When great fatty enlargement of the liver occurs, as it not unfrequently does in women, there may be, as I have already stated, another cause of disturbance; the pyloric end of the stomach may be compressed; the stomach may, in consequence, become enlarged; and then, superadded to the other forms of indigestion, are those which result from an impediment to the ready and complete emptying to the stomach through the pyloric opening.

"There are three classes of remedies available in the treatment of these stomach disorders, viz: sedatives, alkalies, and astringents. Where the cough is hard, and, as often happens at first, vomiting occurs only after hard fits of cough, the most effectual remedies are sedatives. Three or four minims of dilute hydrocyanic acid, or a twelfth of a grain of the muriate or acetate of morphia, three times a day, or these two medicines in combination, will often lessen the violence of the cough, and arrest the vomiting that depends upon it.

"If there be excessive secretion of gastric acid, or excessive acidity of the stomach from other conditions, hydrocyanic acid often fails to quiet the stomach, sometimes even renders the vomiting more frequent, and the vomiting may be checked for a time by alkalies—by fifteen minims of liquor potassæ, or by fifteen grains of the bicarbonate of potash or soda twice a day, an hour before meals.

"But, generally, where there is untimely and excessive secretion in the stomach, the most effectual remedies are astringents. Five grains of the trisnitrate of bismuth may be given three times a day, a quarter of an hour before meals, or ℥iss. of infusion of logwood, or some other vegetable astringent.

"The vegetable astringents check excessive secretion in the stomach as they do in the bowels, and allay vomiting, that depends on excessive secretion, as they allay diarrhœa.

"Medicines of these different classes may often be given in combination with better effect than either may be given singly. Hydrocyanic acid, for example, may be given with advantage in combination with soda, or bismuth, when it cannot be given alone.

"Lime-water, which is at once alkaline and astringent, is often of much efficacy in these and similar cases.

"When vomiting occurs soon after meals; or when food, especially solid food, excites pain; when there is reason to believe that an inflammatory state of the stomach exists; the most effectual remedy is a light and easily digestible diet.

"A disposition to vomiting is always much increased by a costive state of the bowels, and it is therefore essential to obviate this by the occasional use, if need be, of some aperient that does not fret the stomach.

"I need hardly add, that recovery from these stomach disorders is promoted by whatever lessens the irritation in the lung on which they primarily depend."

Opium Smoking.—Opium is not smoked in the same manner as tobacco. The pipe is a tube of nearly the length and thickness of an ordinary flute. Towards one end of it is fitted a bowl of baked clay or some other material, more or less precious, which is pierced with a hole communicating with the interior of the tube. The opium, which before smoking is in the form of a blackish viscous paste, is prepared in the following manner:—A portion of the size of a pea is put on a

needle, and heated over a lamp until it swells and acquires the requisite consistence. It is then placed over the hole in the bowl of the pipe, in the form of a little cone that has been previously pierced with a needle, so as to communicate with the interior of the tube. The opium is then brought to the flame of the lamp, and after three or four inspirations the little cone is entirely burnt, and all the smoke passes into the mouth of the smoker, who then rejects it again through his nostrils. Afterwards the same operation is repeated, so that this mode of smoking is extremely tedious. The Chinese prepare and smoke their opium lying down, sometimes on one side, sometimes on the other, saying that this is the most favorable position; and the smokers of distinction do not give themselves all the trouble of the operation, but have their pipes prepared for them.—*Le Huc's China.*

EDITORIAL AND MISCELLANEOUS.

— It is gratifying to all who appreciate the importance of paying attention to the laws of health, to know that the Committee appointed last winter by the Senate of the State, to inquire into the sanitary condition of the metropolis, has commenced its sessions. They are receiving the testimony of medical men upon the subject, and will, we trust, allow professional knowledge to have its proper weight. The immediate occasion of the appointment of this Committee by the Senate was the introduction of a bill for the regulation and improvement of the sanitary police of New York. This bill has several difficulties to contend with, not the least of which is, that it proposes to take the office of Health Warden from mere politicians, who are hungry for pay for service rendered, but know nothing of the laws of health, and give it to medical men, who cannot be more hungry, and do know what is necessary to be done to guard against the ravages of disease, and how to lessen the virulence of epidemics. Political parties do not care to divest themselves of authority to make these appointments, or to limit the class from which these offices shall be filled. The men who have carried the colors of the successful candidate through the fearful perils of the primary meeting, and adhered to them till the last vote is cast, must be paid, and it is pleasanter to let the state do this than to feel the draining of the private purse. To be sure, many a life is sacrificed to this policy, but politicians do not trouble themselves about such things. The bill before the Senate proposes to make it

the law that the whole of the health officers, from City Inspector down, shall be medical men.

But the bill is also opposed because it proposes to give to the health wardens very extensive powers of interfering with families when the small-pox has broken out in any locality. It authorizes very decided measures to be taken to cut off the communication of the attendants of the patient with the neighbors and others who may be unconsciously in the vicinity of the infection. But here the old feeling of sacredness of the domicile is appealed to by the opponents of the bill, as if this right were in immediate danger. It may be true that a man's house is his castle, but he has no right to loop-hole it, and commence shooting at whomsoever may be near him. In such a case, the gentlemen in blue would soon be knocking at his doors with their locust clubs, or if necessary, Major General Sandford would send to him a company of the famous "7th Regiment." Why, then, should a man claim a right to make his house an inviolable sanctuary when he harbors in it a pestilence even more dangerous than guns. The notion is absurb, though sophists may make it plausible.

It is from the fact that large cities are the constant nurseries of small-pox that we are satisfied that our *state* authorities have a right to interfere in this matter of sanitary regulations in this city. Self-preservation demands that the man in the remotest part of the state should have a right to say, you shall not harbor this pestilence to scatter it among us unseen. The love of the great dollar leads men to import it in rags, or to conceal it in clothes that should have been burned, or to hide it when it seizes on the infant; and the same love sends it out intensified a hundred times upon every line of railway and through every channel of commerce. If the evil is to be effectually stayed, it must be by cutting off the sources which supply it. If the horrid brood is to be destroyed, it must be by breaking up its nests thoroughly and effectually; and to do this sufficient authority must be given to fit persons.

The neglect of vaccination, which, though it does not give absolute immunity, is a great protection, is a crying evil, which must be remedied elsewhere. The number of persons who in this city die from small-pox in its unmitigated form is astonishing. They are not for the most part those who have been brought up in cities, but those whose early life has been passed in more retired places, who have lived where it was never known that a case of small-pox occurred, and who do not fear so distant an evil. But when arrived at mature years, business or pleasure calls them to a city, and without thinking of their

danger, they take no steps to defend themselves, discovering only too late that they have encountered the pestilence. Moreover, vaccination is often very imperfectly done. Sometimes this is the physician's fault, oftener it is the fault of the parent, who, to save the merest trifle of money, ventures to assume the responsibility of performing the operation. An old needle the instrument, and some matter from the arm of another child, are sufficient to produce a sore which is all that is expected, no regard being paid to its characteristics, of which indeed the parent knows nothing. And so the child gets on through life, showing a scar on his arm and trusting to the protection of this vaccination, only learning his mistake when it is too late. We recall at this moment a college friend, who having become a clergyman, with a parish warmly attached to him, and a young family dependent on his exertions, seemed to be filling the measure of usefulness, but being absent from home in the interests of his people, was suddenly taken sick and sent for us to visit him. The mark of the pestilence was on his forehead, and so plainly written that it had been read correctly by a female relative. "How comes it, S.," we said, "that you were not vaccinated." He thought he was, and showed us a scar which he had believed to be his mark of protection. It was that of a sore which could give no more protection from small-pox than a boil. And so he was cut off in the midst of his years and of his usefulness.

No man is safe anywhere from small-pox if he is not vaccinated. Farmer X. may live in his quiet homestead, away from the routes of travel, but he wishes to buy a pair of oxen, and to save time in going to see them, travels a short distance on a railroad. He enters a car, and when he leaves it fifteen minutes later has received the contamination of this fearful disease from his neighbor in the chair which he occupied. Or his good wife gives a cup of milk to some weary wanderer that pauses at her door, and in return finds, when too late, that he bore this plague with him. These are not fancy sketches, but are drawn from life—and are sufficiently striking.

There is an impression very commonly entertained that the protective power of the vaccine virus runs out in every period of seven years. This impression may very wisely be encouraged, for the instances are so many in which persons think themselves protected when they are not; that their safety requires the renewal of the operation, and to this they can by no other argument be easily induced to submit.

A curious fact was elicited by some inquiries made last winter in this city, upon this topic, which will serve still further to illustrate the necessity of careful vaccination. Within a dozen years there has arisen

to be an immense trade in ready-made clothing of all kinds, from the coarsest to the finest. Most of this is made up at the homes of the operatives, the cutting only being done at the shop of the dealers. Now, if John Needle is poor and his family depend on his daily labor, he would be something more or less than human if he should mention to his employers, Small Profits & Co., that he has a child or two who are down with small-pox, for they would refuse to give him any work. He says nothing at all about it, but carrying home his bundle, stitches away upon the fine coat in all the intervals he can find from attending to the wants of his little ones. The air saturates the coat, so that when it is returned to the shop it is a magazine of disease. Small Profits & Co. with their salesmen, are all carefully vaccinated, and do not receive any injury from the infection. The garment is sold and carried to Retiredville, where it is purchased by Esquire Assemblyman, the most prominent and influential person in town. But Esq. A. has not believed that he is in any danger of taking the small-pox, and always laughs at Dr. Careful when he proposes to repeat the vaccination, saying, Ah, Doctor, you want a fee to-day! But one Sunday he goes to church with his new coat on, and a fortnight afterwards prayers are read for his family in affliction. While all the town wonders how "Esquire A." took the small-pox."

If our legislators could realize that in this and many other ways they are endangered by the neglect of the persons who nominally have in charge the protection of the public health, we are sure that they would see where their interests and safety lay, and rising above party considerations, would support this proposition to place the charge of these important matters in the hands of medical men.

— We gave last month a mere outline of the great facilities for clinical instruction furnished by the public and private teachers of this city, and also the many public charities open to the student, with which New York abounds. Since then, the several schools of medicine have commenced their regular courses, and are now fully embarked in the winter's instruction. We understand that the indications at this early period of the session are unusually promising for a large class.

The course of clinical lectures to be delivered at the Bellevue Hospital by the Medical Board of that institution, was commenced on Monday, the 18th October, at 1 o'clock, by an introductory from Dr. Francis, the President of the Board. A large number of medical men and students crowded the new amphitheatre to listen to this distinguished member of our profession. Although in his sixty-ninth year,

Dr. Francis rivals the most diligent student in his enthusiasm for his profession, and his labors for its advancement.

The lecture was in a great measure historical, treating of the rise of clinical instruction in England and this country, and was rendered extremely interesting by short biographical sketches of the teachers when the doctor was a student, whose names are now classical in medical literature.

After the lecture, Dr. J. R. Wood operated upon a female for disease of the inferior maxilla, which required the removal of the whole bone; and also upon one half of the superior maxilla in a man.

The new amphitheatre in which these operations were performed is the best for clinical purposes that we have ever seen. Every person not immediately engaged in the operation could be seated, and yet see the operation in all of its details. Students who have strained their necks and supported the weight of fellow students at such operations, will appreciate the wisdom which has been displayed in the erection of this amphitheatre.

The evening of the same day, October 18th, Prof. A. C. Post delivered an interesting lecture introductory to the course at the University Medical College. At the same time, Prof. Willard Parker gave the introductory at the College of Physicians and Surgeons. Both of these lectures were attended by a crowded assembly of physicians and students. We should be glad to give an abstract of these addresses, did opportunity permit.

The course at the New York Medical College commenced October 19, by a lecture from Prof. R. O. Doremus. His subject was that of Attraction, and was illustrated by many brilliant and pleasing experiments, the apparatus of his well-appointed laboratory enabling him to demonstrate his subject in the most successful manner. The chemical lecture room in which the lecture was delivered was crowded.

— At a regular meeting of the Academy of Medicine, in October, the discussion of Puerperal Fever was resumed. Dr. Barker continued his remarks, and was followed by Dr. Gardner. We are enabled to present the full report of this discussion to our readers in this number of the Monthly. The discussion is still open, but it is not probable that it will be continued by any other member of the Academy, Dr. Clark having signified that he should rest his remarks where he had left them at a previous session.

The Section on Public Health and Legal Medicine made an informal report on the present sanitary condition of New York, and asked for the appointment of a special committee to assist them in investigating this subject. The committee was appointed by the chair.

At an extra session of the Academy, October 20, called to consider the "New Constitution," this document, after a lengthy debate, was, with a few slight modifications, adopted. The principal points in which it differs from the *old* one, are, that every candidate must be proposed by *three* Fellows *personally acquainted with him;* that the President shall be elected for *two* years; the Vice-President, the Secretaries, and the Treasurer, for *three* years, and the Trustees for *five* years. A Council is added to the governing power of the Academy, which is to consist of the above-named officers and the chairmen of the three standing committees—on Admission, Medical Ethics, and Medical Education—which are composed of five members each, and elected for five years. Heretofore all officers were elected for *one* year.

The duties of the Council seem to be very various. Among the list we find "that they shall appoint the Librarian and Assistant Secretary, (who, however, is nominated by the Recording Secretary;) they shall nominate such Fellows as are to be appointed to deliver series of discourses or lectures on scientific subjects before the Academy, and also a Fellow to deliver the Anniversary Address."

The Annual Assessment by this Constitution is raised to Five Dollars.

It goes into effect after the regular meeting in November. The first meeting then under the New Constitution, will be the third Wednesday in November, (17,) when the Anniversary Address will be delivered. Dr. E. R. Peaslee is the orator this year, elected by the vote of the Society under the Old Constitution.

From a review of a work on Clinical Teaching in Germany, and especially in Vienna, by Dr. Gallarvardin, in the *Edinburgh Medical Journal*, we extract the following sketch, a pen and ink portrait of the celebrated Skoda—the very type "of the spirit and tendencies of the Vienna School."

"That which constitutes the originality of Skoda among all the clinical teachers of Germany, and which has made for him so universal a reputation, is his skepticism. In medicine there has been rarely seen, if ever, a *doubter* so absolute, so fervent; for his is no *theoretical* skepticism (which is a very common thing,) but a *practical* skepticism, which he actively propagates both by his teaching and through the writings of his pupils, and by its application at the bedsides of the sick. Thus from his name any physician who neither believes in, nor practices any form of therapeutics, is termed *Scodist*. *Scodism* among the Germans is Pyrrhonism in medicine. We would lay long odds that our reader could never divine the remedy which Skoda applies at the bedside. Every year, during nine or ten months of clinical lessons, he employs on his twenty-eight sick—*patients* they may indeed be

called—*in succession* all the most classical, most celebrated means of cure, and do you know with what intention? Simply to convince his pupils that all these medications are always and completely *inefficient*. If by chance—*chance* is indeed the term to use here—if on any treatment there supervenes a prompt and very marked amelioration, he attributes all the honor to the natural course of the disease. Example:

"A young man of nineteen, very robust, comes into the hospital on the 11th May, on account of a pneumonia of the right lung, of a highly inflammatory and severe form.

"On the 13th and 14th, Skoda causes him to take infusion of foxglove, which induces six stools a day.

"On the 15th a pound of blood is drawn from the arm by his orders.

"Next day, the 16th, the pulse, which on the preceding evening was at 106, falls to 66.

"To explain so notable and prompt a modification of the pulse, Skoda expresses himself in these terms: 'Perhaps it is the effect of the bleeding, such things have been seen; perhaps, too, it may have been the effect of the foxglove, that has been seen too; it may also be considered as connected with the natural evolution of the disease, that has been seen too.' Skoda reasons habitually after this fashion, never denying in a very decided manner. In this way, little by little, he *insinuates* doubt into the minds of his disciples, all the more surely that he does not insist on its reception; so that finally these come insensibly to lose all practical faith—to raze from their medical vocabulary the word *causality*, just as their master does.

"Skoda is of the *young school*. Thus we have never heard him quote a single physician who flourished before the first years of the present century, and of course, *a fortiori*, he never cites any physician of antiquity. He thinks it perfectly useless to know how the problems of philosophical and practical medicine, always the same, at all times and in all places, having always for their subject 'man sick,'—how these problems, we say, have been agitated, and resolved by Hippocrates, Galen, Baglivi, Stahl, Boerhaave,—nay, even by the men who shed lustre on the school of Vienna, Van Swieten, Stoll, Hildenbrand, J. P. and Joseph Franck."

Excretion of Arsenic and Antimony in the Urine.—Dr. Kletzinsky, as the result of his investigations upon the expulsion of metals in the secretions, comes to the following conclusions:—1. The presence of a small quantity of albumen in arsenical urine is indubitable, but it is problematical in antimonial urine. The excretion of both metals may take place in the form of their alkaline salts. 2. The excretion takes place a short time after poisoning by arsenic, more quickly than in antimony poisoning, and continues uninterruptedly until death or recovery—the excretion of antimony continuing usually longer than that of arsenic. 3. That in its forensic relation the analysis of the urine in arsenic or antimony poisonings, providing the patient live for from twelve to twenty-four hours, is capable of furnishing a complete negative or positive conclusion.—*Wien Wochenschrift*, No. 8. *Times and Gazette.*

STATISTICS OF SUICIDE.—Mr. Buckle has asserted, in his able and interesting recent work on "Civilization," that the number of suicides is a "constant quantity;" in other words, that suicides, like other so-called "crimes," occur very regularly. In the five years, 1852–56, it is shown by the Registrar-General that 5,415 persons put a period to their earthly career by self-destruction, viz: 3,886 males and 1,529 females. The annual average of male suicides is 777·2, and that of females 305·8. The general average shows that upwards of 1,000 persons (1,083·0) put an end to their sufferings by committing suicide in every year of grace. The lowest number of suicides was 1,031 (in 1853), and the highest 1,182 (in 1856). Poisoning being the easiest, is a common, but by no means a general means of self-destruction. The favorite poisons are arsenic, opium, laudanum, prussic acid, and essential oil of bitter almonds. It is a remarkable fact that female suicides manifest a strange predilection for the very painful, irritant poison, called oxalic acid. As many as 34 were so foolish as to choose this compound of oxygen and carbon, while only 15 males resorted to it. On the other hand, 67 men resorted to hydrocyanic acid and 33 to the oil of bitter almonds, while only 8 women had resolution to swallow the former fatal poison, and 18 the latter. Strychnia was used by one man and one woman, and in one case camphor was used. But hanging is by far the most general mode of suicide, for nearly half of the annual average of suicides terminate their miserable lives by suspension. Cut-throats and drowning stand next in the order of frequency; 8-10th of all the suicides are committed in one of these three ways. Asphyxia proper, or suffocation by the fumes of charcoal, is by no means a favorite mode of suicide here as in France. The greatest number of suicides occur between the ages of 35 and 45. Thirty-three persons, of both sexes, committed suicide at 10 years of age, and 14 persons of both sexes at the age of 85.—*Ib.*

Treatment of Prolapsus Uteri by Medicines given internally.—Dr. Bonorden observes that as prolapsus uteri usually arises from hypertrophy of the organ and a relaxed state of the round and broad ligaments, the indications are to remove the hypertrophied condition, and to strengthen the ligaments. In two cases he has been enabled to completely fulfill them by internal remedies. He administered twenty drops of the *tr. ferri. mur.* morning and evening, giving with the evening dose also three gr. of *secale cornut* and ten gr. of *gum galbanum*, the external parts of generation being well rubbed several times a day with Hofmann's *balsamum vitæ*. At night, the patients were directed to lay with the pelvis somewhat raised. The secale was continued for fourteen nights, next alternate nights, and then a while at longer periods.—*Berlin Med. Zeit. Times and Gazette.*

Treatment of Uterine Hæmorrhage.—Dr. Witteke strongly recommends the application to the whole abdomen of cloths or handkerchiefs well moistened with a lotion composed of weak spt. menth. pip., spt. cinnam. ää ℥vj. aceti ℥viii. At first, they excite a marked impression of cold, to keep up which they have to be reapplied every five minutes. During the second hour, as a general rule, they should be changed

only every ten or fifteen minutes. The womb contracts powerfully, the bleeding and faintness cease, and after the application has been continued for six or eight hours, a general warm sweat breaks out, which is a sign that all danger is over. With these applications are occasionally combined two or three doses of a powder consisting of secale and cinnamon ää five grs. If the spirit is not at hand, to a pint of infusion of peppermint may be added half a pint of vinegar, and the same of spirits of wine. On an emergency, too, we may mix one part of water with half of spirit and half of vinegar; but the restoration of strength and the sweating are not so readily produced.—*Ibid*, No. 12.

— Died at Bolivar, Venezuela, on Friday, September 17th, David Uhl, M.D., of New York.

Our older subscribers will remember several articles which have appeared in our pages from the pen of Dr. Uhl, whose death we have thus recorded. The topics which most frequently were the subjects of his essays pertained to medical jurisprudence, more particularly in reference to the practical parts of the science, as the methods of conducting investigations which required medico-legal knowledge. A pretty extensive experience of the difficulties which arise in apparently simple cases, had been afforded to him by his connection with the Coroner's office in this city, and was the basis of his papers. During the autumn of 1854, he lectured on the same subjects at the New York Medical College, repeating his course the subsequent year, and always to the gratification of his classes.

Dr. Uhl was a man of good talents and of great industry, and though wanting a classical education, he was a clear and accurate writer. Though young, his diligence was making itself felt in his professional progress, and his position was constantly improving. His connection with the Cunningham Burdell affair was unfortunate. Having without any desire on his part been made acquainted with the purpose to commit a gross fraud, he at once consulted those who should have been wise counsellors, as to his duty in the case; and when these all agreed, determined to follow their advice, though he foresaw that it might be used by some to his disadvantage. The outcry which was raised against his course by the friends of the accused, in order to draw attention from her, was, however, not anticipated, and he was mortified to find that many members of the profession were blinded by these sophisms. In disgust, he determined to remove from this city, and an opportunity presenting itself to him to visit Venezuela, he embraced it, sailing for that country last summer. We are not informed, but it is probable, that he fell a victim to the malarious fever of the region.

— In a recent case of alleged murder by poisoning in this city, the body of a female was disinterred a year after death, and subjected to the strictest chemical analysis. Prof. Doremus, assisted by Drs. Zenker and Budd, examined the *entire body* and found arsenic in notable quantities. The character of this examination, in its extent, minuteness, and accuracy, has attracted much attention from analytical chemists.

— Dr. Boyd, Health Officer of the City of Brooklyn, reports 22 cases of Yellow Fever as having occurred in that city during the past summer.

Books and Pamphlets received.

Report on the Vital Statistics of the United States, made to the Mutual Life Insurance Company of New York. By James Wynne, M.D., &c. New York: H. Balliere. 1857.

Concentrated Organic Medicines: Being a Practical Exposition of the Therapeutic Properties and Clinical employment of the combined proximate medicinal constituents of Indigenous and Foreign Plants. By Grover Coe, M.D. Published by B. Keith & Co. New York: 1858.

A System of Human Anatomy, General and Special. By Erasmus Wilson, F.R.S., &c. A New and Improved American Edition, from an Enlarged London Edition. Edited by William H. Gobrecht, M.D., &c., with 397 Illustrations on Wood. Philadelphia: Blanchard & Lea. 1858.

Lectures on the Principles and Practice of Physic. By Thomas Watson, M.D. A new American from the last and Enlarged Revised English Edition, with additions by D. Francis Condie, M.D., &c., with 185 Illustrations on Wood. Philadelphia: Blanchard & Lea. 1858.

A Course of Lectures of Obstetrics. By Wm. Tyler Smith, M.D., &c.; with an Introductory Lecture on the History of the Art of Midwifery, and Copious Practical Annotations. By Augustus K. Gardner, M.D., &c. 212 Engravings. New York: Robert M. De Witt. 1858.

Selections from Favorite Prescriptions of Living American Practitioners. By Horace Green, M.D., LL.D., &c. New York: Wiley & Halsted. 1858.

Diseases of the Urinary Organs. A Compendium of their Diagnosis, Pathology and Treatment. By William Wallace Morland, M.D., &c. Philadelphia: Blanchard & Lea. 1858.

Illustrations of Typhus Fever in Great Britain, the result of Personal Observations made in the Summer of 1853, with some remarks as to its Origin, Habits, Symptoms and Pathology. By J. B. Upham, M.D., &c. Boston: David Clapp. 1858.

An Examination of the Question of Anæsthesia, arising on the Memorial of Charles Thomas Wells, presented to the United States Senate, &c. By the Hon. Truman Smith, U. S. Senator from Connecticut. New York: 1858.

Transactions of the Third Session of the Medical Society of the State of California, convened at San Francisco, February, 1858. Sacramento: 1858.